START

Department of Energy
Richland Operations Office
P.O. Box 550
Richland, Washington 99352

94-PCA-061

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Mr. Joseph J. Witczak
Unit Supervisor
Regulatory and Technical
Support Unit
Nuclear Waste Program
State of Washington
Department of Ecology
P.O. Box 47600
Olympia, Washington 98504-7600

Mr. David L. Lundstrom
Section Manager, 200 Areas
Nuclear Waste Program
State of Washington
Department of Ecology
1315 West 4th Avenue
Kennewick, Washington 99336

Dear Messrs. Witczak and Lundstrom:

NOTIFICATION OF CLASS 1 MODIFICATIONS TO THE HANFORD FACILITY RESOURCE CONSERVATION AND RECOVERY ACT PERMIT (RCRA PERMIT), DANGEROUS WASTE PORTION

Condition I.C.3. of the Hanford Facility RCRA Permit, Dangerous Waste Portion (DW Portion), addresses Class 1 modifications as defined in Washington Administrative Code (WAC) 173-303-830(4)(a)(i)(A). This condition allows for notification of Class 1 modifications to be made to the State of Washington Department of Ecology (Ecology) on a quarterly basis. Several Class 1 modifications had already been identified and implemented when the RCRA Permit became effective on September 28, 1994. These Class 1 modifications are discussed below.

Part II of the DW Portion is being modified to update information included in the Hanford Facility Contingency Plan. The DW Portion was prepared using the Hanford Facility Contingency Plan included in Revision 1 of the Hanford Facility Dangerous Waste Permit Application, General Information, that was submitted in June of 1993. Enclosure 1 of this letter includes for informational purposes the modifications that are necessary to update Part II.

Part III of the DW Portion is being modified to update information included for the 616 Nonradioactive Dangerous Waste Storage Facility (NRDWSF) and 305-B Storage Facility. Revision 2 of the 616 NRDWSF and 305-B Storage Facility Dangerous Waste Permit Applications (Part B) were used to prepare the RCRA Permit. These revisions were submitted to Ecology and the U.S. Environmental Protection Agency (EPA) in October of 1991 and October of 1992, respectively. Since the dates of these submittals, both operational and regulatory changes have been incorporated at the 616 NRDWSF and 305-B Storage Facility. The Class 1 modifications that are being made pursuant to Condition I.C.3 of the DW Portion are being made to update requirements included in Part III of the DW Portion to ensure that all activities conducted at the 616 NRDWSF and 305-B Storage Facility are in compliance with the RCRA Permit. Enclosures 2 and 3 of this letter include for informational purposes the modifications that are necessary to update the requirements of Part III.

Copies of the modifications discussed above, and any other Class 1 modifications, will be maintained in the Hanford Facility Operating Record until, as specified in Condition I.C.3., DW Portion, formal notification is made 10 days prior to the end of Ecology's fiscal year quarter (i.e., by December 22, 1994). This formal notification will be certified in accordance with WAC 173-303-810(13)(a). Should Ecology determine that any of the modifications discussed in this letter do not qualify as Class 1 modifications as defined in WAC 173-303-830, written authorization to continue operations is requested until the appropriate level of modification can be accomplished.

Should you have any questions regarding this information, please contact Mr. C. E. Clark, U.S. Department of Energy, Richland Operations Office

on (509) 376-9333, Mr. R. C. Brunke, Westinghouse Hanford Company on (509) 376-1653, Mr. H. T. Tilden II, Pacific Northwest Laboratory on (509) 376-0499, or Ms. J. W. Badden, Bechtel Hanford, Inc. on (509) 372-9204.

Sincerely,

James E. Rasmussen, Acting Program Manager
Office of Environmental Assurance,
Permits, and Policy
DOE Richland Operations Office

W. T. Dixon, Manager
Environmental Services
Westinghouse Hanford Company

T. D. Chikalla, Director
Facilities and Operations
Pacific Northwest Laboratory

S. R. Weil, Manager
Environmental Engineering
Bechtel Hanford, Inc.

Enclosures:
1. Part II Changes Required to Update General Facility Conditions
2. Part III Changes Required to Update Unit Specific Conditions Included for the 616 NRDWSF
3. Part III Changes Required to Update Unit Specific Conditions Included for the 305-B Storage Unit

cc w/encl:
Administrative Records, WHC
B. Burke, CTUIR
D. Duncan, EPA
R. Jim, YIN
D. Powaukee, NPT

cc w/o encl:
J. Badden, BHI
W. Dixon, WHC
M. Jaraysi, Ecology
S. Price, WHC
J. Stohr, Ecology
H. Tilden II, PNL

ENCLOSURE 1

PART II CHANGES REQUIRED TO UPDATE GENERAL FACILITY CONDITIONS

Section A: Hanford Facility Contingency Plan

- Page APP 7A-2, lines 2 and 49: Remove Page APP 7A-2 and replace with the attached page (Attachment 1). This change is made to delete emergency phone number 811 and replace it with the new emergency phone number 911.

  Reason: This updates the emergency phone number to the one currently used. Refer to Appendix I of Washington Administrative Code (WAC) 173-303-830, item A.1.

- Page APP 7A-3, lines 45 and 48: Remove Page APP 7A-3 and replace with the attached page (Attachment 2). This change is made to delete emergency phone number 811 and replace it with the new emergency phone number 911.

  Reason: This updates the emergency phone number to the one currently used. Refer to Appendix I of WAC 173-303-830, item A.1.

- Page APP 7A-21, lines 8 through 10: Remove Page APP 7A-21 and replace it with the attached page (Attachment 3). This change is made to update the current DOE-RL primary contractor assignments.

  Reason: The primary contractor assignments has been changed. Refer to Appendix I of WAC 173-303-830, item A.1.

- Page APP 7A-T1, line 11 through 14: Remove Page APP 7A-T1 and replace it with the attached page (Attachment 4). This change is made to update the name and locations of the Emergency Management Center.

  Reason: The name and locations of the Emergency Management Center has been changed. Refer to Appendix I of WAC 173-303-830, item A.1.

ENCLOSURE 1
ATTACHMENT 1

1.0 GENERAL INFORMATION

The Hanford Facility is defined as a single *Resource Conservation and Recovery Act* (RCRA) *of 1976* facility identified by the U.S. Environmental Protection Agency/State Identification Number WA7890008967 that consists of over 60 treatment, storage, and/or disposal (TSD) units conducting dangerous waste management activities. The Hanford Facility consists of the contiguous portion of the Hanford Site that contains these TSD units and, for the purposes of RCRA, is owned by the U.S. Government and operated by the U.S. Department of Energy, Richland Operations Office (excluding lands north and east of the Columbia River, river islands, lands owned or used by the Bonneville Power Administration, lands leased to the Washington Public Power Supply System, and lands owned by or leased to the state of Washington).

2.0 PURPOSE

The *Hanford Facility Contingency Plan* (Plan), together with each TSD unit-specific contingency plan, meets the WAC 173-303 requirements for a contingency plan. This Plan includes descriptions of responses to a nonradiological hazardous materials spill or release at Hanford Facility locations not covered by TSD unit-specific contingency plans or building emergency plans. This Plan includes descriptions of responses for spills or releases as a result of transportation activities, movement of materials, packaging, and storage of hazardous materials.

3.0 EMERGENCY COORDINATORS

The overall responsibility for implementation of this Plan lies with the building emergency director (BED) or their designated alternates. The BED has the responsibilities of the Emergency Coordinator as discussed in WAC 173-303-360 and is also the Event Commander. A list of all BEDs and alternates is maintained at various locations throughout the Hanford Facility, and these individuals can be reached 24 hours a day. The BEDs have the authority to commit all necessary resources (both equipment and personnel) to respond to any emergency. Additional responsibilities have been delegated to Hanford Fire Department personnel who are authorized to act for the BED when the BED is absent. These Hanford Fire Department personnel have the authority to commit all necessary resources (both equipment and personnel) to respond to any emergency.

Response by a BED (or an Emergency Coordinator) usually is obtained through the DOE-RL single point-of-contact* by dialing telephone number ~~811~~ 911 or 373-3800 or 375-2400. The single point-of-contact has been designated as the contact point to mobilize a response to any Hanford Facility emergency. The single point-of-contact is available at all times and has the responsibility to initiate notifications to the BED or alternate to begin responses to emergencies, as well as to dispatch emergency responders (Hanford Fire Department, Hanford Patrol, or ambulance services). All emergency notifications to the BED, building managers, etc., can be made directly from the affected TSD unit or through the single point-of-contact.

The unit-specific DOE-RL technical contact responds to regulatory agency inquiries regarding this Plan. The unit-specific DOE-RL technical contact is accessed by contacting 373-3800 or 375-2400.

4.0 IMPLEMENTATION OF THE CONTINGENCY PLAN

This Plan describes parallel decision flow paths for evaluating and classifying an incident. The U.S. Department of Energy (DOE) Orders and WAC 173-303-360 require incident classification. The definition of emergencies according to DOE Orders differs from the definition contained in WAC 173-303. Because of this, a dual incident classification decision path is necessary to meet both DOE Orders and WAC 173-303 requirements. Incident classification according to DOE Orders is described in this Plan for completeness only. The DOE Orders will not be used to evaluate whether an incident requires implementation of a contingency plan.

Implementation of a contingency plan will occur when a BED has determined that a release, a fire, or an explosion has occurred at the Hanford Facility that could threaten human health and the environment. A release is defined in WAC 173-303-040 within the definition of "discharge". An incident requiring evacuation of personnel or the summoning of emergency response units will not necessarily indicate that a contingency plan has been or will be implemented.

Any incident that poses a potential threat to human health and the environment discovered by TSD unit personnel requires immediate notification of the BED and the single point-of-contact, who then notifies the Hanford Fire Department. Personnel may respond, in accordance with the procedures described in TSD unit-specific contingency plans, before the arrival of the BED, as long as such response is within their level of training. The Hanford Fire Department is contacted through the single point-of-contact on all incidents involving dangerous materials or mixed waste.

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*The single point-of-contact is the Hanford Patrol Operations Center (~~811~~ 911 or 373-3800) and/or the Pacific Northwest Laboratory single Point-of-Contact (375-2400).

ENCLOSURE 1
ATTACHMENT 2

5.0 INCIDENT RESPONSE

Incident response procedures have been established for each TSD unit. The initial response to any emergency will be to immediately protect the health and safety of persons in the immediate area. Identification of released material is essential to determine appropriate protective actions. Containment, treatment, and disposal assessment will be the secondary responses.

The following sections describe actions for personnel for several different types of incidents, including a generic response, that might occur on the Hanford Facility. Regardless of how an incident is classified, minimum onsite notification requirements exist to ensure that the appropriate organizations are contacted and that the incident is classified correctly.

5.1 INCIDENT GENERIC RESPONSES

Responses made by the discoverer, single point-of-contact, and the BED are discussed in the following sections. Identification of hazardous materials and dangerous waste and the assessment of hazards also are discussed.

5.1.1 Discoverer

The discoverer performs the following actions:

1. Immediately notifies potentially affected personnel (including the BED, if present, for a TSD unit incident) of the incident

2. Immediately notifies the single point-of-contact (~~811~~911* or 375-2400) and provides all known information, if the information can be obtained without jeopardizing personnel safety, including the following:

   - Name(s) of chemical(s) involved and amount(s) spilled, on fire, or otherwise involved, or threatened by, the incident

   - Name and callback telephone number of person reporting the incident

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*The DOE-RL and other contractor personnel are trained to notify the Hanford Emergency number (~~811~~911 from onsite telephones and 375-2400 from 375 prefix telephones) for immediate dispatch of the Hanford Fire Department for fire, ambulance services, hazardous materials/mixed waste response, and for the Hanford Patrol. Hanford Patrol, who operates the ~~811~~911 number, and Pacific Northwest Laboratory Security, who operates the 375-2400 number, notify other organizations and contractors to ensure appropriate actions are taken.

- Location of incident (identify as closely as possible)
- Time incident began or was discovered
- Where the materials involved are going or might go, such as into secondary containment, under doors, through air ducts, etc.
- Source and cause, if known, of spill or discharge
- Name(s) of anyone contaminated or injured in connection with the incident
- Any corrective actions in progress
- Anyone else who the discoverer has contacted.

5.1.2 Single Point-of-Contact

The single point-of-contact performs the following actions:

1. Initiates notification to the BED, or one of the alternates if the BED cannot be reached immediately, to arrange immediate response to the incident
2. Requests immediate response from the Hanford Fire Department for fire, ambulance service, and/or hazardous material/mixed waste incidents as needed
3. Contacts the Hanford Patrol for traffic control and security measures, as needed, based on the report of the discoverer
4. Initiates notification to appropriate management of the spill or release incident
5. Supports the BED in providing further notification and coordination of response activities if needed
6. Activates or requests activation of the appropriate alarm signals (as required) for the affected building or affected 200, 300, 400, or 600 Areas, when the BED determines that protective actions are necessary
7. Notifies the emergency response organizations
8. Prompts the affected area emergency control centers (ECC) to activate if requested by the BED or other authorized persons
9. Prompts activation of the DOE-RL Emergency Action and Coordinating Team (EACT), if necessary, to recommend protective actions for areas outside the Hanford Facility.

ENCLOSURE 1
ATTACHMENT 3

Protective clothing and respiratory protective equipment are maintained for use during both routine and emergency operations. This equipment is identified in the unit-specific contingency plans.

7.5 SPILL CONTROL AND CONTAINMENT SUPPLIES

Supplies of absorbent pillows are located in operating areas as necessary. These pillows absorb organic or inorganic materials and have a rated absorption capacity of approximately 0.26 gallon (1 liter) of waste each. Absorbents might be used for barriers to contain liquid spills as well as for absorbent purposes. Diatomaceous earth for absorption of liquid waste spills is available. Neutralizing absorbent is available for response to acid or caustic spills. A supply of empty containers (U.S. Department of Transportation 17E tight head and U.S. Department of Transportation 17H open head) and salvage containers (overpacks) also are maintained, as well as brooms, shovels, and miscellaneous spill response supplies.

7.6 HANFORD SITE EMERGENCY ORGANIZATIONS

The Hanford Facility has fire and patrol personnel trained and equipped to respond in emergency situations. The Hanford Fire Department is the Hazardous Materials Incident Command Agency for the Hanford Site and has a Hazardous Materials Response Team that is trained to stabilize and control hazardous materials emergencies. A description of equipment for hazardous materials responses available through the Hazardous Materials Response Team is given in Table 3. Locations of the four fire stations on the Hanford Facility are shown on Figure 1.

The Hanford Patrol provides support to the Hanford Fire Department during an incident, including such activities as activation of area crash alarm telephone systems or area sirens (for evacuation or take cover), access control, traffic control, and assistance in emergency notifications.

8.0 COORDINATION AGREEMENTS

This section describes a number of coordination agreements, or memoranda of understanding (MOU) established by and through the DOE-RL to ensure proper response resource availability for incidents involving the Hanford Facility.

An agreement among the four major Hanford Site contractors ~~(an operations and engineering contractor, a research and development contractor, an engineer and constructor contractor, and a medical and health services contractor)~~ (an operations, engineering and construction contractor, an environmental restoration contractor, a research and development contractor, and a medical and health services contractor) defines the interfaces and notifications required during an emergency. The DOE-RL has the overall responsibility for emergency preparedness. Per the agreements, the operations and engineering

contractor has responsibility for Site-wide emergency preparedness while each contractor retains responsibility for emergency preparedness at individual units. Agreements have been established with a number of offsite authorities to reduce the impact to human health and the environment in the event that an incident has offsite public health implications, or if an onsite emergency warrants offsite assistance. These agreements are activated through the emergency notification of the DOE-RL (Section 4.1).

8.1 LOCAL, STATE, AND FEDERAL AUTHORITIES

Various agreements have been established among the DOE-RL and Benton, Franklin, and Grant Counties and the states of Washington and Oregon. These agreements describe the cooperative arrangements among these agencies for any onsite emergency that warrants offsite assistance. These agreements describe the planning for, communication of, and response to emergencies at the Hanford Facility that might have offsite consequences.

8.2 HANFORD FIRE DEPARTMENT MUTUAL AID

The Hanford Fire Department provides fire department services for the Hanford Site and Hanford Facility. Mutual aid agreements have been established with the Richland, Kennewick, and Pasco fire departments; with Benton County Fire Districts 1 through 6, Franklin County Fire District 3, and Walla Walla Fire District 5.

8.3 MEDICAL AND FIRST AID

Professional medical help is provided onsite by the DOE-RL through the Hanford Environmental Health Foundation. Doctors and nurses are available for emergency assistance at all times. These medical personnel are trained in procedures to assist personnel contaminated with hazardous and/or radioactive material. Emergency call lists are maintained to provide professional medical consultation at all times.

Referral to offsite hospital facilities is made by the Hanford Environmental Health Foundation physician providing emergency assistance by telephone or in person. The primary hospital used in emergencies is Kadlec Hospital, Richland. Kennewick General Hospital, Kennewick, and Our Lady of Lourdes Hospital, Pasco, are used as backup facilities. Agreements have been established among these hospitals and the DOE-RL.

8.4 AMBULANCE SERVICE

Ambulance service is provided by the Hanford Fire Department, which uses paramedics and emergency medical technicians as attendants. This service is available from area fire stations on a 24-hour, 7-day basis. Additional ambulance service is available from other local city fire departments through the mutual aid agreements (Section 8.2).

ENCLOSURE 1
ATTACHMENT 4

Table 1. Emergency Control Centers.

Emergency Control Center	Responsibility
Northern Area Emergency Control Center Location: 2750-E, 200 East Area	Geographic area of responsibility: All 100 and 200 Areas plus the 600 Area north of the WYE Barricade bounded by the Columbia River and Highway 240.
300 Area Emergency Control Center Location: 3701-D, 300 Area	Geographic area of responsibility: RCHS, RCHC, RCHN, 1100 and 3000 Areas plus the 600 Area south of the WYE Barricade bounded by the Columbia River and Highway 240.
400 Area Emergency Control Center Location: Fast Flux Test Facility, 400 Area	Geographic area of responsibility: 400 Area.
~~Emergency Management Center~~ Site Operations Team Location: ~~1170 Building~~ Federal Building, Richland	Area of responsibility: Responsible for the remaining 600 Area not covered by the area ECCs, assisting area ECCs, coordinating the Facility-wide response to emergencies, and serving as the focal point for other Hanford Site contractors and DOE-RL during emergencies.
DOE-RL Emergency Control Center Location: Federal Building, Richland	Area of responsibility: Responsible for providing overall direction for all Hanford Facility emergency situations involving the DOE-RL and/or contractor personnel, ensuring direct interface with all offsite agencies for mitigation and protection of offsite populations, facilities, and the environment.

RCHS = Richland South.
RCHC = Richland Central.
RCHN = Richland North.

ENCLOSURE 2

PART III CHANGES REQUIRED TO UPDATE UNIT SPECIFIC CONDITIONS INCLUDED FOR THE 616 NRDWSF

Section A: Part A Permit

- Page 4 of 25: Remove Page 4 of 25 and replace with the attached page (Attachment 1). This change was made to delete waste code WC01 and increase estimated annual volume of waste code WC02 to 55,000 kilograms.

  Reason: This change is made to reflect revisions made to Washington Administrative Code (WAC) 173-303. Refer to Appendix I of WAC 173-303-830, item A.1.

Section B: Part B Permit

- Page 2-8, Line 3: Remove Page 2-8 and replace with the attached page (Attachment 2). This change is made to add the following sentences to line 3: "A mechanical fork truck lift and associated safety equipment (guards, handrails, etc.) is mounted on the containment pad. Engineering change notice 605639 associated with design drawing H-6-1556, Sheet 1 of 2, shows the design of the mechanical fork truck lift and is provided in Appendix 4B."

  Reason: This equipment is currently used at 616 NRDWSF. Refer to Appendix I of WAC 173-303-830, item A.3.

- Page 2-11, Lines 27 and 38: Remove Page 2-11 and replace with the attached page. (Attachment 3). This change is made to delete the following on line 27 "graded gravel surface with an underlying aggregate base. This surface may be paved to control dust". The text on line 27 will be replaced with "paved asphalt surface with an underlying aggregate base."

  Reason: The access roadway has been paved. Refer to Appendix I of WAC 173-303-830, item A.1.

- Page 2-16, Lines 29-32: Remove Page 2-16 and replace with the attached page (Attachment 4). This change is made to reflect Ecology's new Kennewick office address.

  Reason: Ecology has relocated. Refer to Appendix I of WAC 173-303-830, item A.1.

- Page 2-18, Line 38: Remove Page 2-18 and replace with the attached page (Attachment 5). This change is made to add an additional bullet on line 38 stating: "Evidence tape from field verified waste is untampered."

  Reason: Evidence tape is being used as part of the waste verification process. Refer to Appendix I of WAC 173-303-830, item A.1.

- Page F2-5, Figure 2-5: Remove Page F2-5 and replace with the attached page (Attachment 6). This change is made to delete existing compatibility table and replace it with the new compatibility table reflecting updated U.S. Department of Transportation (DOT) hazard classes.

  Reason: Container storage compatibility configuration has been modified to reflect revised DOT regulations. Refer to Appendix I of WAC 173-303-830, item A.1.

- Page F2-6, Figure 2-6: Remove Page F2-6 and replace with the attached page (Attachment 7). This change is made to delete existing diagram of french drain in Figure 2-6 and replace it with the new schematic reflecting the new locking drain plug.

  Reason: Drawing associated with loading pad drain plug has been modified to accurately show locking cover mechanism. Refer to Appendix I of WAC 173-303-830, item A.1.

- Page 3-1, Lines 12 and 20: Remove Page 3-1 and replace with the attached page (Attachment 8). This change is made to remove the words "generated onsite" on line 12 and the word "onsite" on line 20.

  Reason: This change will allow receipt of waste from noncontiguous facilities with different EPA/State ID numbers. Refer to Appendix I of WAC 173-303-830, item A.1. This is in accordance with the Dangerous Waste Portion of the Hanford Facility RCRA Permit, Condition II.P.1.

- Page F3-3, Figure 3-3: Remove Page F3-3 and replace with the attached page (Attachment 9). This change is made to delete existing Waste Designation Worksheet and replace with the attached Waste Designation Worksheet.

  Reason: The new worksheet contains the current designation procedures. Refer to Appendix I of WAC 173-303-830, item A.1.

- Page T3-2, Table 3-2: Remove Page T3-2 and replace with the attached page (Attachment 10). This change is made to delete waste code WC01.

  Reason: This change is made to reflect revisions made to WAC 173-303. Refer to Appendix I of WAC 173-303-830, item A.1.

- Page T4-2, Table 4-2, Line 31: Remove page T4-2 and replace with the attached page (Attachment 11). This change is made to add the figure "(s)" after the word "cabinet" on line 31, and to add the following before line 35:

	or
34 (55 gal) (208.2 liters) 2 Flammable liquid storage cabinets (170 gal) (1,024 liters)	34 (30 gal) (113.6 liters)

  Reason: This change allows the use of 2 cabinets as an option. Refer to Appendix I of WAC 173-303-830, item A.1.

- Page F6-3, Figure 6-3: Remove Page F6-3 and replace with the attached page (Attachment 12). This change is made to delete existing Container Storage Layout and replace with the new Container Storage Layout.

  Reason: This change allows the use of 2 cabinets as an option. Refer to Appendix I of WAC 173-303-830, item A.1.

- Appendix 2A: Remove existing map H-6-958, Revision 2, and replace with the attached map H-6-958, Revision 5 (Attachment 13).

  Reason: This map shows the current Hanford Facility configuration. Refer to Appendix I of WAC 173-303-830, item A.1.

- Appendix 3A: Remove existing Radiation Exempt Facility List and replace with the attached Radiation Exempt Facility List (Attachment 14).

  Reason: This list has the current list of buildings exempt from radiological screening. Refer to Appendix I of WAC 173-303-830, item A.1.

- Appendix 4B: Remove Page APP 4B-ii and the existing design drawings and replace with the attached Page APP 4B-ii, the new design drawings, and engineering change notices (Attachment 15).

  Reason: These are the current drawings and engineering change notices. Refer to Appendix I of WAC 173-303-830, item A.1.

- Appendix 7A: Remove existing Building Emergency Plan and replace with the attached Building Emergency Plan (Attachment 16).

  Reason: This revision to the Building Emergency Plan includes the emergency phone number 911, the current forms and checklists used, and reflects current emergency response actions to be taken. Refer to Appendix I of WAC 173-303-830, item B.6.b.

Section C: Changes Required to the Hanford Facility RCRA Permit

- Permit condition III.1.B.w: The condition is clarified to state that the concrete core sampling requirements of Section 11.1.5 are not required to verify cleanliness of a spill area while the 616 NRDWSF is operating.

  Reason: Core sampling of a spill area while the 616 NRDWSF is operating might compromise the integrity of the secondary containment. Refer to Appendix I of WAC 173-303-830, item A.1.

- Permit condition III.1.B.x: This permit condition is deleted. Alternatively, reword the text in the permit condition to state that the personal protective equipment required under Appendix 7A (Building Emergency Plan-616 NRDWSF) is stored in the Packaging Material and Handling Equipment Area in a sealed cabinet (sealed with evidence tape) with a specific listing of contents. The integrity of the seal is verified, as noted, on the current inspection (daily/weekly) records.

  Reason: This reflects the current location and inspection of personal protective equipment. Refer to Appendix I of WAC 173-303-830, item B.6.b.

ENCLOSURE 2
ATTACHMENT 1

Continued from page 2.
NOTE: Photocopy this page before completing if you have more than 26 wastes to list.

I.D. NUMBER *(entered from page 1)*

W	A	7	8	9	0	0	0	8	9	6	7

IV. DESCRIPTION OF DANGEROUS WASTES (continued)

LINE NO.	A. DANGEROUS WASTE NO. *(enter code)*	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE *(enter code)*	D. PROCESSES 1. PROCESS CODES *(enter)*	D. PROCESSES 2. PROCESS DESCRIPTION *(if a code is not entered in D(1))*
1	D027	5,000	K	S01	Storage
2	D028				
3	D029				
4	D030				
5	D031				
6	D032				
7	D033				
8	D034				
9	D035				
10	D036				
11	D037				
12	D038				
13	D039				
14	D040				
15	D041				
16	D042				
17	D043				
18	WC02	55,000			
19	WP01	24,000			
20	WP02	5,000			
21	WP03	4,000			
22	WT01	80,000			
23	WT02	114,000			
24	WL01				
25	WL02				
26					

ENCLOSURE 2
ATTACHMENT 2

spill or discharge are detailed in the Building Emergency Plan - 616 Building provided in Appendix 7A)

- Same fire protection system as previously described for the storage cells

- Emergency exit door.

Equipment and material stored in the packaging material and handling equipment area are as follows:

- Tools, drum dollies, forklift, and other waste handling equipment

- Absorbents and other miscellaneous spill control equipment.

Additional containers and absorbents are stored in the portable storage unit located approximately 50 feet (15.2 meters) north of the 616 NRDWSF (Figure 2-3). A detailed list of equipment is included in the Building Emergency Plan - 616 Building provided in Appendix 7A.

2.1.3.5 Receiving Area. The receiving area, in the east end of the 616 NRDWSF (Figure 2-3), is a corridor used when transferring waste from the east loading area to the storage cells. Waste containers that are leaking or of questionable integrity sometimes are overpacked in this area. Compatible waste with incomplete paperwork also can be staged in this area while discrepancies are resolved. Because of the types of activities that are performed in the receiving area, the area has the following additional features:

- Sealed concrete floor that slopes to a 252-gallon (953.9-liter) trench for the collection of liquid from spills or leaks that might inadvertently enter the area (actions to be taken in response to a spill or discharge are detailed in the Building Emergency Plan - 616 Building provided in Appendix 7A)

- Same fire protection system as previously described for the storage cells

- One and a half-hour fire-rated rollup doors at each end of the corridor.

2.1.3.6 Loading and Unloading Areas. The 616 NRDWSF has two loading and unloading areas (Figure 2-3). The primary loading and unloading area is a 20- by 30-foot (6.1- by 9.1-meter) sealed concrete slab with a 13- by 20-foot (4.0- by 6.1-meter) approach ramp. The primary loading and unloading area, located at the east end of the 616 NRDWSF, is provided for incoming and outgoing dangerous waste transfers. The slab is sloped to a trench for liquid collection. The trench has a drain (with a locking removable plug) that connects to a french drain (Figure 2-6) for the release of accumulated water (e.g., rainwater, snowmelt) (Section 2.5.1). Design drawings of the french drain are provided in Appendix 4B. The slab and ramp are surrounded by a curb

with the exception of the ramp entry, which is at the high point of the slope. The curb provides containment and channels liquid to the collection trench in this area. A mechanical fork truck lift and associated safety equipment (guards, handrails, etc.) are mounted on the containment pad. Engineering change notice 605639 associated with design drawing H-6-1556, Sheet 1 of 2, shows the design of the mechanical fork truck lift and is provided in Appendix 4B.

The secondary loading and unloading area [a 25-foot 6-inch by 20-foot (7.8- by 6.1-meter) slab with a 13- by 20-foot (4.0- by 6.1-meter) approach ramp] is located outside the combustible cell on the north side of the 616 NRDWSF. The secondary loading and unloading area is of identical construction to the primary loading and unloading area. This secondary loading and unloading area is a redundant system and is not used under normal operating conditions.

The containment trenches are kept free of excess water when the 616 NRDWSF is in operation. In the event that a dangerous waste spill occurs on either of the loading areas, the released material will be recaptured to the greatest extent possible using pumps, absorbents, or alternate methods. Any additional liquids used to decontaminate the spill area will be containerized and managed as specified in Chapter 3.0. Wipe samples will be performed to determine cleanup adequacy (Chapter 4.0, Section 4.1.1.8). Water (e.g., rainwater, snowmelt) accumulated in the trench before completion of the laboratory analysis or wipe samples also will be containerized. Accumulated water will be sampled and characterized if the initial wipe samples determine that the cleanup was inadequate. Actions to be taken in response to a spill or discharge are detailed in the Building Emergency Plan - 616 Building provided in Appendix 7A. Water accumulated in the 'clean' or 'spill free' loading and unloading area trenches will be drained to the french drain system (Section 2.5.1).

2.2 TOPOGRAPHIC MAP [B-2]

A topographic map, showing a distance of at least 1,000 feet (305 meters) around the 616 NRDWSF, is located in Appendix 2A (Drawing H-13-000014). This map is at a scale of 1 unit equals 2,000 units. The contour interval clearly shows the pattern of surface water flow in the vicinity of the 616 NRDWSF. The map contains the following information:

- Map scale
- Date
- Prevailing wind speed and direction
- A north arrow
- Surrounding land use
- Legal boundaries of the 616 NRDWSF
- Access road location

ENCLOSURE 2
ATTACHMENT 3

2.4.1 Hanford Site Roadways

Figure 2-10 shows the major roads throughout the Hanford Site. These roads are classified as either primary or secondary routes. The primary routes include Routes 4N, 4S, 10, 2N, 3, 6, and 11A, as well as various avenues within each area. The primary routes are constructed of bituminous asphalt [usually 2 inches (5.1 centimeters) thick, but the thickness of the asphalt layer will vary with each road] with an underlying aggregate base in accordance with U.S. Department of Transportation requirements. The secondary routes are constructed of layers of an oil and rock mixture with an underlying aggregate base. The aggregate base consists of various types and sizes of rock found onsite. Currently, no load-bearing capacities of these roads are available; however, loads as large as 140 pounds (63.5 kilograms) per square inch have been transported without observable damage to road surfaces. All roads meet the requirements for the American Association of State Highway and Transportation Officials HS-20-44 load rating (AASHTO 1983). An HS-20-44 loading represents a two-axle tractor [front axle loading of 8,000 pounds (3,628.7 kilograms) and rear axle loading of 32,000 pounds 14,515 kilograms)] plus a single-axle trailer with a 32,000-pound (14,515-kilograms) axle loading.

2.4.2 The 616 Nonradioactive Dangerous Waste Storage Facility Roadways

The 616 NRDWSF is located approximately 200 feet (61 meters) north of Route 3 (Figure 2-2). The access road from Route 3 to the 616 NRDWSF has a ~~graded gravel surface with an underlying aggregate base. This surface may be paved to control dust~~ paved asphalt surface with an underlying aggregate base. Drawing H-13-000014 in Appendix 2A shows the 616 NRDWSF access road configuration.

2.4.3 Traffic Control Signs, Signals, and Procedures

Standard traffic control signs are used throughout the Hanford Site (e.g., hexagonal stop signs, triangular yield signs). The only traffic light in the vicinity of the 616 NRDWSF is a flashing amber warning light in front of the 609-A Fire Station on Route 3 (Figure 2-2). The light is switched to red whenever an emergency requires a rapid response from the Hanford Fire Department.

Speed limits are posted throughout the Hanford Site, and the maximum posted speed is 55 miles (88.5 kilometers) per hour on major thoroughfares. Inside the 200 East and 200 West Areas, posted speeds are reduced to a maximum of 35 miles (56.3 kilometers) per hour, and held to speeds as low as 15 miles (24.1 kilometers) per hour.

2.5 PERFORMANCE STANDARDS [B-5]

The 616 NRDWSF is designed to minimize the exposure of personnel to dangerous waste and hazardous substances and to prevent dangerous waste and hazardous substances from reaching the environment.

In addition, measures are taken to ensure that the 616 NRDWSF is maintained and operated in a manner that prevents:

- Degradation of groundwater quality
- Degradation of air quality by open burning or other activities
- Degradation of surface water quality
- Destruction or impairment of flora or fauna outside of the 616 NRDWSF
- Excessive noise
- Negative aesthetic impacts
- Unstable hillsides or soils
- Use of processes that do not treat, detoxify, recycle, reclaim, and recover waste material to the extent economically feasible
- Endangerment to the health of employees or the public near the 616 NRDWSF.

The measures taken to prevent each of the above negative effects from occurring are described in the following sections.

2.5.1 Measures to Prevent Degradation of Groundwater Quality

Degradation of groundwater quality is prevented by storing waste containers inside an enclosed concrete building on self-contained, sealed concrete pads. In addition, the 616 NRDWSF accepts only those waste packages meeting appropriate U.S. Department of Transportation requirements. Containers are opened only in areas with spill containment. The 616 NRDWSF design and administrative controls significantly reduce the possibility of loss of waste to the ground and/or contamination of the groundwater. [In the vicinity of the 616 NRDWSF, the water table ranges from about 180 to 280 feet (54.9 to 85.3 meters) below the surface.]

Each loading pad trench drain plug is kept closed and secured when not in use. The 616 NRDWSF Supervisor controls the trench key. When water (e.g., rainwater, snowmelt) from a known source has accumulated in either of the loading pad trenches, it is released to the ground via the french drain (Figure 2-6). Before the liquid is released, the following is performed.

1. Liquid is visually inspected for signs of contamination.
2. Daily inspection reports and the 616 NRDWSF logbook are reviewed to identify any spills on the pad.
3. Cleanup reports are reviewed to verify that the pad is clean (Section 2.7.2.1).

ENCLOSURE 2
ATTACHMENT 4

administrative controls over the designation, packaging, loading, transporting, and storing of dangerous waste. Each generating unit must receive written approval for the type, quantity, and packaging of the waste before being handled at the 616 NRDWSF.

Employees are trained to handle and store waste packages. The training includes dangerous waste awareness, emergency response, and workplace safety (Chapter 8.0). Protective equipment, safety data, and hazardous materials information are readily available for employee use.

A contingency plan, consisting of a building emergency plan and emergency response procedures, is in place. This plan is implemented for spill prevention and containment, and provides countermeasures to reduce safety and health hazards to employees, the environment, and the public. The contingency plan is described in Chapter 7.0.

2.6 BUFFER MONITORING ZONES [B-6]

Requirements for buffer monitoring zones have been deleted from WAC-173-303-440. Therefore, no discussion of the checklist items under buffer monitoring zones [B6] will be included in this permit application.

2.7 SPILLS AND DISCHARGES INTO THE ENVIRONMENT [B-7]

The procedures that are followed to ensure immediate response to a nonpermitted spill or discharge of dangerous waste from the 616 NRDWSF to the environment are detailed in the Building Emergency Plan - 616 Building provided in Appendix 7A.

2.7.1 Notification [B-7a]

The following are details of notification of the DOE-RL, Ecology, and the National Response Center.

- The building emergency director or line management documents all emergencies on an occurrence report (Figure 2-11), which must be completed within 24 hours. The occurrence report is used to provide management with facts about an unplanned event and to disseminate information to those responsible for preventing recurrence of similar events. The DOE-RL is notified by either line management or the assigned overview organization, depending on the consequences of the event. Copies of the occurrence reports are retained at the 616 NRDWSF.

- All detectable spills to the environment and/or the atmosphere will be reported immediately to the Occurrence Notification Center. The Occurrence Notification Center notifies Ecology of the release of dangerous waste.

- Upon detection, immediate notification will be made to Ecology at (206) 438-7016 of all spills as required under applicable regulations.

- In addition, if a spill exceeds the reportable quantities established under *Comprehensive Environmental Response, Compensation, and Liability Act* (CERCLA) *of 1980*, according to 40 CFR 302, the Occurrence Notification Center will notify the National Response Center 800-424-8802.

- The report to Ecology and the National Response Center will contain the following information:

  - Name and telephone number of reporter
  - Name and location of waste unit or zone
  - Time and type of incident
  - Name and quantity of material(s) involved to the extent known
  - Extent of injuries if any
  - Possible hazards to human health and the environment outside the Hanford Facility boundary.

- All detectable releases of dangerous waste, including those that do not exceed a CERCLA limit, are reported to the Hanford Fire Department and the contractor's environmental protection organization. The contractor's environmental protection organization compiles a report for submittal to the DOE-RL. The reports are kept on file at the 616 NRDWSF and are available for review by the appropriate regulatory agencies. The DOE-RL submits the report to the following address:

  Washington State Department of Ecology
  ~~7601 West Clearwater, Suite 102~~ 1315 West Fourth Avenue
  Kennewick, WA 99336
  Phone: ~~509 546 2990~~ 509-735-7581.

- All detectable spills or releases that occur during transportation by an independent transporter (i.e., transporter with their own EPA/State identification number) will be reported by the transporter to the Occurrence Notification Center, the DOE-RL, and Ecology. In addition, a written report will be submitted to the following address:

  Director, Office of Hazardous Material Regulations
  Materials Transport Bureau
  Department of Transportation
  Washington, D.C. 20990.

2.7.2 Mitigation and Control [B-7b]

Actions taken to protect human health and the environment in the event of a nonpermitted spill or discharge are detailed in the Building Emergency Plan - 616 Building provided in Appendix 7A. A discussion of the most likely types of spills or discharges to occur at the 616 NRDWSF is included in the Building Emergency Plan - 616 Building.

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ATTACHMENT 5

2.7.2.1 Cleanup of Released Wastes or Substances [B-7b(1)]. Actions to be taken to clean up all released hazardous/dangerous waste or hazardous substances and the criteria used to determine the extent of removal are addressed in contingency plan documents noted in Chapter 7.0.

2.7.2.2 Management of Contaminated Soil, Waters, or Other Materials [B-7b(2)]. Actions to be taken to demonstrate that all soil, waters, or other materials contaminated by a spill or discharge will be treated, stored, or disposed of in accordance with WAC 173-303 are addressed in contingency plan documents noted in Chapter 7.0.

2.7.2.3 Restoration of Impacted Area [B-7b(3)]. Because of the remote location of the 616 NRDWSF [near the center of the DOE-RL managed Hanford Facility (Figure 2-1)], spills or discharges occurring on property that is not owned by the U.S. Government are unlikely. Therefore, a description of the actions to be taken to restore the impacted area and to replenish resources is not required.

2.8 MANIFEST SYSTEM [B-8]

The Hanford Facility uses an EPA Uniform Hazardous Waste Manifest for all offsite shipments of dangerous waste. Onsite waste tracking forms are voluntarily used for transporting waste on the Hanford Facility.

The following sections provide information on receiving shipments, response to manifesting discrepancies, and provisions for nonacceptance of shipments.

2.8.1 Procedures for Receiving Shipments [B-8a]

Before shipment of nonradioactive dangerous waste to the 616 NRDWSF, the following occurs (Chapter 3.0, Section 3.2).

- The generating unit secures the waste in a controlled, less-than-90-day-storage area.
- If the contents of the container cannot be verified, the waste coordinator for the generating unit (Chapter 3.0, Section 3.2) identifies the waste from associated manufacturer's data, waste records, or sample analysis.
- The waste coordinator for the generating unit submits a waste storage/disposal request (Chapter 3.0, Section 3.2) to Solid Waste Engineering.
- A trained designator in Solid Waste Engineering identifies the proper waste designation.
- The completed waste designation is reviewed and signed by a peer designator and a Solid Waste Engineering manager.

- Solid Waste Engineering sends a hazardous waste disposal analysis record (Chapter 3.0, Section 3.2) to the generating unit's waste coordinator, the 616 NRDWSF, the Transportation Logistics group, and the Solid Waste Disposal group.

- The generating unit's waste coordinator ensures that the dangerous waste is packaged, marked, and labeled in accordance with the hazardous waste disposal analysis record.

- The generating unit's waste coordinator prepares an onsite waste tracking form. The onsite waste tracking form identifies the applicable contractor as the transporter and the 616 NRDWSF as the receiving storage unit.

- Transportation Logistics personnel inspect the containers for compliance with U.S. Department of Transportation regulations and the hazardous waste disposal analysis record.

- Solid Waste Disposal personnel transport the dangerous waste from the generating unit to the 616 NRDWSF.

Before a shipment is accepted at the 616 NRDWSF, each container is reviewed against the onsite waste tracking form and the hazardous waste disposal analysis record. During the review, the following items are checked:

- Proper shipping name

- Proper hazard class

- Proper marking and labeling

- Valid radiation release sticker in place [except for exempted facilities (Appendix 3A)]

- Proper packaging (e.g., correct specification container)

- Container condition

- Evidence tape from field verified waste is untampered.

If the container passes these checks, the container is placed in the appropriate storage cell (Chapter 4.0, Section 4.1.1.2 and Chapter 6.0, Section 6.4.1). The acceptance procedure also ensures the following occurs.

- Significant discrepancies are noted on all copies of the waste tracking form.

- The transporter is given one signed copy of the waste tracking form.

- A copy of the waste tracking form is sent to the generating unit within 30 days of receipt.

- A copy of the waste tracking form is retained for at least 5 years by the 616 NRDWSF and Solid Waste Engineering.

ENCLOSURE 2
ATTACHMENT 6

616 BUILDING STORAGE COMPATIBILITY CELLS

STORAGE AREA	PRIMARY STORAGE	SECONDARY STORAGE	PROHIBITED STORAGE
• FLAMMABLE *Class 1A* FP < 73°F (BP < 100°F)	Flammable Solids Flammable Liquids - 1A Flammable Gases Spontaneously Combustible Materials	Non-RCRA Waste Solids Non-RCRA Waste Liquids Combustible Liquids Flammable Liquids - 1B & 1C Non-Flammable Gases Flammable Gases Irritating Materials Class 9, Misc. Haz. Materials	Flammable Solids - DWW † Poison Gases Corrosive Materials (Acidic) Corrosive Materials (Caustic)
• FLAMMABLE *Classes 1B & 1C* FP < 73°F (BP ≥ 100°F) 73°F ≤ FP < 100°F	Flammable Solids Flammable Liquids - 1B & 1C Non-Flammable Gases Spontaneously Combustible Materials	Non-RCRA Waste Solids Non-RCRA Waste Liquids Combustible Liquids Irritating Materials Class 9, Misc. Haz. Materials	Flammable Solids - DWW † Flammable Liquids - 1A Poison Gases Corrosive Materials (Acidic) Corrosive Materials (Caustic)
FLAMMABLE *Class 1A - Cabinet* Dangerous When Wet	Flammable Solids - DWW †	Flammable Solids Flammable Liquids - 1A Flammable Liquids - 1B & 1C	Non-RCRA Waste Liquids Poison Gases Corrosive Materials (Acidic) Corrosive Materials (Caustic)
FLAMMABLE *Class 1B & 1C - Cabinet* Dangerous When Wet	Flammable Solids - DWW †	Flammable Solids Flammable Liquids - 1B & 1C	Non-RCRA Waste Liquids Poison Gases Corrosive Materials (Acidic) Corrosive Materials (Caustic)
• COMBUSTIBLE *Class II, Class IIIA & IIIB* 100°F ≤ FP < 140°F 140°F ≤ FP < 200°F FP ≥ 200°F	Non-RCRA Waste Solids Non-RCRA Waste Liquids Combustible Liquids Poison Gases Poisonous Materials ‡ Irritating Materials Class 9, Misc. Haz. Materials	Flammable Solids Non-Flammable Gases	Flammable Solids - DWW † Flammable Liquids Flammable Gases Corrosive Materials (Acidic) Corrosive Materials (Caustic)
OXIDIZER Promotes Combustion	Non-RCRA Waste Solids Non-RCRA Waste Liquids Oxidizers Organic Peroxides Irritating Materials Class 9, Misc. Haz. Materials	Combustible Liquids Non-Flammable Gases Poisonous Materials ‡	Flammable Solids - DWW † Flammable Liquids Flammable Gases Poison Gases Corrosive Materials (Acidic) Corrosive Materials (Caustic)
ACIDIC pH < 7	Non-RCRA Waste Solids Poisonous Materials ‡ Corrosive Materials (Acidic) Irritating Materials Class 9, Misc. Haz. Materials	Combustible Liquids Non-RCRA Waste Liquids Non-Flammable Gases	Flammable Solids - DWW † Flammable Solids Flammable Liquids Flammable Gases Poison Gases Oxidizers Organic Peroxides Corrosive Materials (Caustic)
CAUSTIC pH > 7	Non-RCRA Waste Solids Corrosive Materials (Caustic)	Combustible Liquids Non-RCRA Waste Liquids Non-Flammable Gases Poisonous Materials ‡	Flammable Solids - DWW † Flammable Solids Flammable Liquids Flammable Gases Poison Gases Oxidizers Organic Peroxides Corrosive Materials (Acidic)
Packaging & Sampling Room		Non-RCRA Waste Solids Non-RCRA Waste Liquids Combustible Liquids Irritating Materials Class 9, Misc. Haz. Materials	Flammable Solids - DWW † Flammable Liquids Flammable Gases Corrosive Materials (Acidic) Corrosive Materials (Caustic)

* *Use of the terms "FLAMMABLE" and "COMBUSTIBLE" in this table are as defined in the 1993 Edition of NFPA 30, not 49 CFR.*
† *Class 4.3, Dangerous When Wet Material*
‡ *Poisonous Liquids, Packing Group I, Zone A, may be stored in the COMBUSTIBLE cell only.*

Figure 2-5. Waste Storage Compatibility by Hazard Class.

ENCLOSURE 2
ATTACHMENT 7

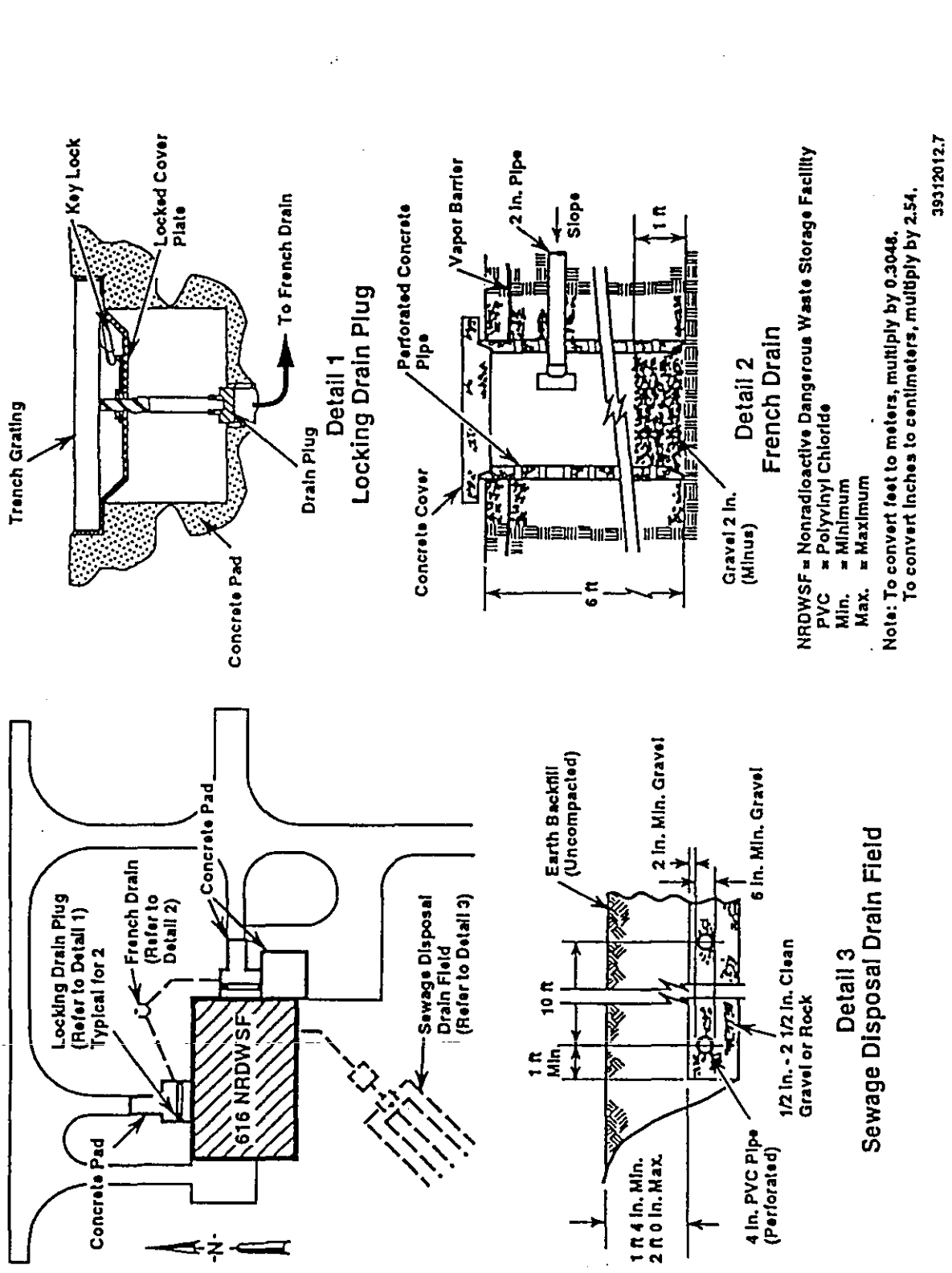


Figure 2-6. Diagram of French Drain.

ENCLOSURE 2
ATTACHMENT 8

3.0 WASTE CHARACTERISTICS [C]

This chapter provides information on the physical, chemical, and biological characteristics of the waste stored at the 616 NRDWSF. A waste analysis plan is included that describes the methodology used for determining waste types.

3.1 CHEMICAL, BIOLOGICAL, AND PHYSICAL ANALYSIS [C-1]

Nonradioactive dangerous waste ~~generated onsite~~ is transported to the 616 NRDWSF where the waste is stored before transport to an offsite TSD facility. Waste normally is received in U.S. Department of Transportation 5-, 30-, and 55-gallon (18.9-, 113.6-, and 208-liter) containers, but also can be received in other U.S. Department of Transportation-approved containers such as wooden or fiberboard boxes (Table 3-1). No waste is accepted at the 616 NRDWSF in bulk loads.

The 616 NRDWSF receives nonradioactive dangerous waste from ~~onsite~~ processing, testing, maintenance, and construction activities. Shipments are made from onsite generating units to the 616 NRDWSF. The DOE-RL and onsite contractors have implemented control procedures to ensure that proper waste identification, packaging, and Ecology designation are attained (Section 3.2). Figure 3-1 illustrates the process for handling containerized nonradioactive dangerous waste generated onsite.

Most of the nonradioactive dangerous waste received at the 616 NRDWSF consists of old (outdated) pure chemical products, spent dangerous waste sources, product mixtures in small laboratory quantities, and empty dangerous waste drums (WAC 173-303-160). Some waste regulated under the *Toxic Substances Control Act of 1976* (polychlorinated biphenyl) is received and stored at the 616 NRDWSF. Any waste listed in WAC 173-303-9903, or any dangerous waste mixture (WAC 173-303-084), or characteristic waste (WAC 173-303-090), could be generated on the Hanford Site. Waste normally can be characterized into 'U', 'P', 'F', 'D', 'WP', 'WC', or 'WT' Ecology waste code designations by the use of manufacturers' product information, material safety data sheets, laboratory analysis, and such references as 40 CFR 302.4, *Dangerous Properties of Industrial Materials* (Sax 1984), *Registry of Toxic Effects of Chemical Substances* (NIOSH 1986), and *The Condensed Chemical Dictionary* (Sax and Lewis 1987). Waste also is characterized in accordance with the requirements of 40 CFR 261.

It is the responsibility of the generating units to completely and correctly identify the dangerous constituents of their waste. Based on waste identification information provided by the generating unit's waste coordinator, the Solid Waste Engineering staff designates the waste in

accordance with WAC 173-303-070. The Solid Waste Engineering staff maintains auditable copies of the following for each waste stored at the 616 NRDWSF, as applicable:

- All records providing a description of the waste
- Documentation identifying the dangerous characteristics of the waste
- The basis for waste designation
- Laboratory reports with chemical, biological, and physical analysis of samples
- Onsite waste tracking forms
- Land disposal restriction documentation (Chapter 12.0, Section 12.4.2.2.7).

The generating unit and the 616 NRDWSF maintain copies of the onsite waste tracking forms and associated documents [i.e., hazardous waste disposal analysis record (Section 3.2)] identifying the waste characteristics and assigned waste designations.

In general, each package is unique and new containers continuously are being accepted for storage. In 1990, the 616 NRDWSF received 1,932 containers in 94 shipments, an average shipment being 20 containers every 4 to 5 days. The 616 NRDWSF accepts waste for storage with the waste codes identified in Table 3-2, excluding explosive, shock-sensitive (Section 4.1.4.1), class IV oxidizer [in waste volumes greater than 10 pounds (4.5 kilograms)] and radioactive waste. The 616 NRDWSF also can store containerized *Toxic Substances Control Act* regulated waste.

Nonradioactive dangerous waste is shipped to an appropriate permitted TSD facility. The waste is designated according to Ecology regulations for waste designation outlined in WAC 173-303-070.

3.1.1 Containerized Waste [C-1a]

The 616 NRDWSF does use a secondary containment system (Chapter 4.0, Section 4.1.1.3). Therefore, the requirements of WAC 173-303-630(7)(c) are not applicable to the 616 NRDWSF.

3.1.2 Waste in Tank Systems [C-1b]

Operation of the 616 NRDWSF does not involve the storage of dangerous waste in tank systems. Therefore, the requirements of WAC 173-303-640 are not applicable to the 616 NRDWSF.

ENCLOSURE 2
ATTACHMENT 9

SOLID WASTE DESIGNATION WORKSHEET

DESCRIPTION OF WASTE							
WSDR #		Container Quantity and Type					
Item #		Solid Phase	☐	Density †		Waste Status	
MSDS #		Liquid Phase	☐	pH		Designator #	
Weight, kg		Gas Phase	☐	FP (°F)		Desig. Date	

† *For solid & liquid substances & mixtures of substances, the numerical values of mass density & specific gravity for any given sample of matter are equal to one another.*

CHEMICAL COMPOSITION OF WASTE	ECOLOGY TOX. CATEGORY	WEIGHT % (w/o)	‡ (Σ w/o i) + # i = X,A,B,C,D	REFERENCE (RTECS, etc.)

‡ *Equivalent Concentration (EC%)* = $\sum$ *w/o X* + $\frac{\sum \text{w/o A}}{10} + \frac{\sum \text{w/o B}}{100} + \frac{\sum \text{w/o C}}{1{,}000} + \frac{\sum \text{w/o D}}{10{,}000}$ EC% =

* HAZARDOUS WASTE CATEGORY	GUIDING DOCUMENTS	REG.? Yes	REG.? No	WASTE CLASS DW/EHW/AHW	HAZARDOUS WASTE CODES	LDR? Yes	LDR? No
DANGEROUS WASTE SOURCE *Used:* Possibly one of: F-, K-, & W001	40 CFR 261.31 & 261.32 WAC 173-303-082 & WAC 173-303-9904 List	☐	☐			☐	☐
DISCARDED CHEMICAL PRODUCT *Unused & Sole* active ingredient: P & U	40 CFR 261.33 WAC 173-303-081 & WAC 173-303-9903 List	☐	☐			☐	☐
CHARACTERISTIC OF IGNITABILITY Flashpoint < 140°F and/or oxidizer: D001	40 CFR 261.21 49 CFR 173.115 - 127 WAC 173-303-090 (5)	☐	☐			☐	☐
CHARACTERISTIC OF CORROSIVITY pH ≤ 2 or pH ≥ 12.5: D002	40 CFR 261.22 49 CFR 173.136 WAC 173-303-090 (6)	☐	☐			☐	☐
CHARACTERISTIC OF REACTIVITY Water-reactive, explosive, etc: D003	40 CFR 261.23 WAC 173-303-090 (7) (No 49 CFR reference)	☐	☐			☐	☐
TOXICITY CHARACTERISTIC (TC) Unlisted Hazardous Waste: D004 - D043	40 CFR 261.24 WAC 173-303-090 (8) (Use *LAB WORKSHEET*)	☐	☐			☐	☐
TOXICITY CRITERIA Total EC% > 0.001; see 9906 Graph to determine if WT02-DW or WT01-EHW	WAC 173-303-100 (5) & 173-303-9906 Graph; Total EC% from table above (Consult RTECS)	☐	☐			☐	☐
PERSISTENCE CRITERIA IHF > 0.01%, WP02-DW or IHF > 1%, WP01-EHW; PAH > 1%, WT03-EHW	WAC 173-303-100 (6) & 173-303-9907 Graph; (No DW for PAH)	☐	☐			☐	☐
CARCINOGENIC CRITERIA > 0.01% single carcinogen, WC02-DW or > 1.0 % total carcinogens, WC02-DW	WAC 173-303-100 (7) (No EHW for carcinogens) (Read ECOLOGY letter(s))	☐	☐			☐	☐
PCB WASTE Possibly one of: W001, PCB1, or PCB2	40 CFR 761 (TSCA) WAC 173-303-9904 List (Use *PCB FLOWSHEET*)	☐	☐			☐	☐

• *NOTE: The SOLID WASTE DESIGNATION WORKSHEET is intended to be used with the SOLID WASTE DESIGNATION FLOWSHEET.*

PROPER SHIPPING NAME					
Waste Class		Waste Codes			
Hazard Class		Hazard Labels			
DOT ID #		Ship To			
Packaging		Storage Cell		Land Ban Codes	

Figure 3-3. Typical Treatment, Storage, and/or Disposal Worksheet.

ENCLOSURE 2
ATTACHMENT 10

Table 3-2. Waste Codes of Materials Stored at the 616 Nonradioactive Dangerous Waste Storage Facility.

Waste codes	Reference
U and P numbers	WAC-173-303-9903
F numbers	WAC-173-303-9904
W001	WAC-173-303-9904
D001	WAC-173-303-090(5)
D002	WAC-173-303-090(6)
D003	WAC-173-303-090(7)
D004 through D043	WAC-173-303-090(8)
WT01 and WT02	WAC-173-303-101/104
WP01, WP02 and WP03	WAC-173-303-102/104
~~WC01 and~~ WC02	WAC-173-303-103/104
WL01 and WL02	WAC-173-303-180

ENCLOSURE 2
ATTACHMENT 11

Table 4-2. Container Management Per Storage Cell.

Cell	Maximum containers per tier Tier 1 (ground)	Tier 2
Regular storage		
Caustics	50 (55 gal) (208.2 liters)	40 (55 gal) 10 (30 gal)[a] (113.6 liters)
Oxidizers	50 (55 gal) (208.2 liters)	40 (55 gal) 10 (30 gal)[a] (113.6 liters)
Combustibles	58 (55 gal) (208.2 liters)	40 (55 gal) 18 (30 gal)[b] (113.6 liters)
Acids	60 (55 gal) (208.2 liters)	40 (55 gal) 20 (30 gal)[b] (113.6 liters)
Flammable liquid storage		
Class 1A	32 (55 gal) (208.2 liters) 1 flammable liquid storage cabinet (135 gal) (512 liters)	32 (20 gal)[c] (75.7 liters)
Class 1B*	40 (55 gal) (208.2 liters)	40 (30 gal)[d] (113.6 liters)

[a]Tier 2, row 1 ≤ 30 gal (113.6 liters) (Chapter 6.0, Figure 6-4)

[b]Tier 2, rows 1 and 6 ≤ 30 gal (113.6 liters) (Chapter 6.0, Figure 6-4)

[c]Tier 2 ≤ 20 gal (75.7 liters)

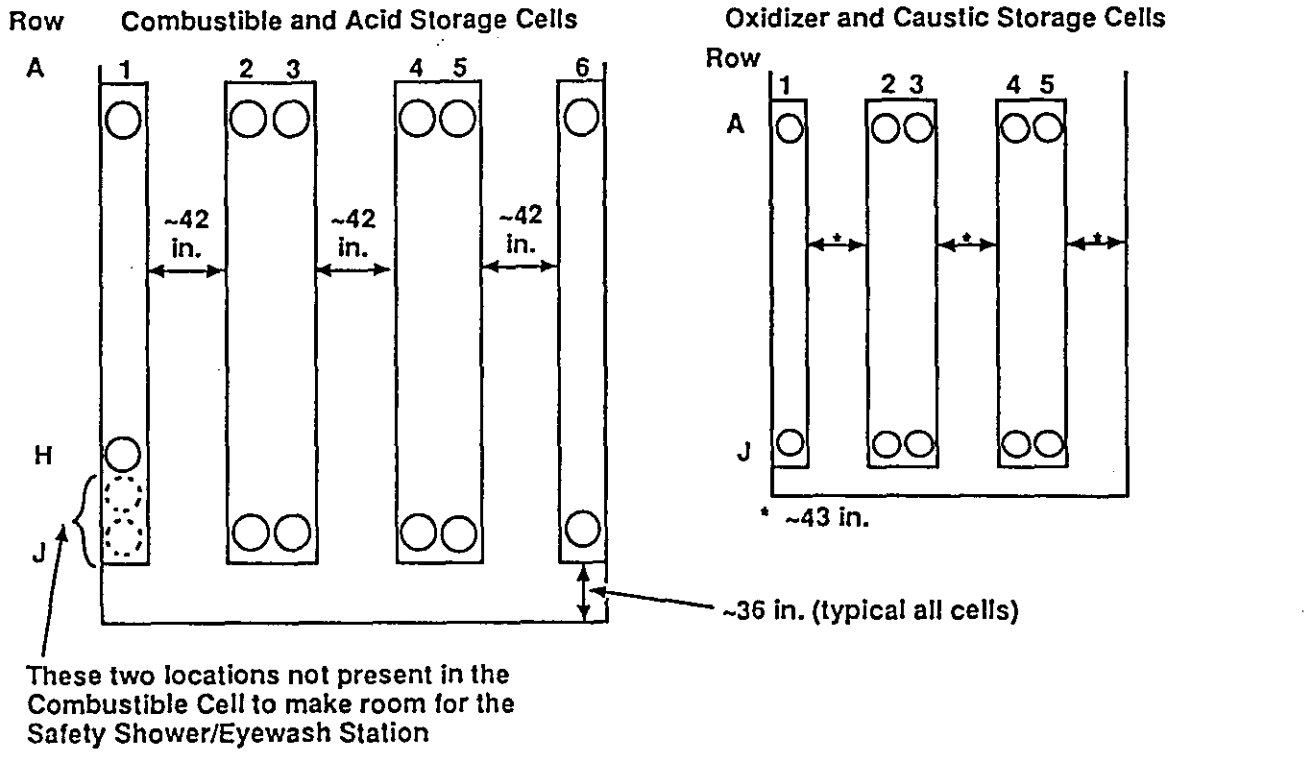
[d]Tier 2 ≤ 30 gal (113.6 liters)

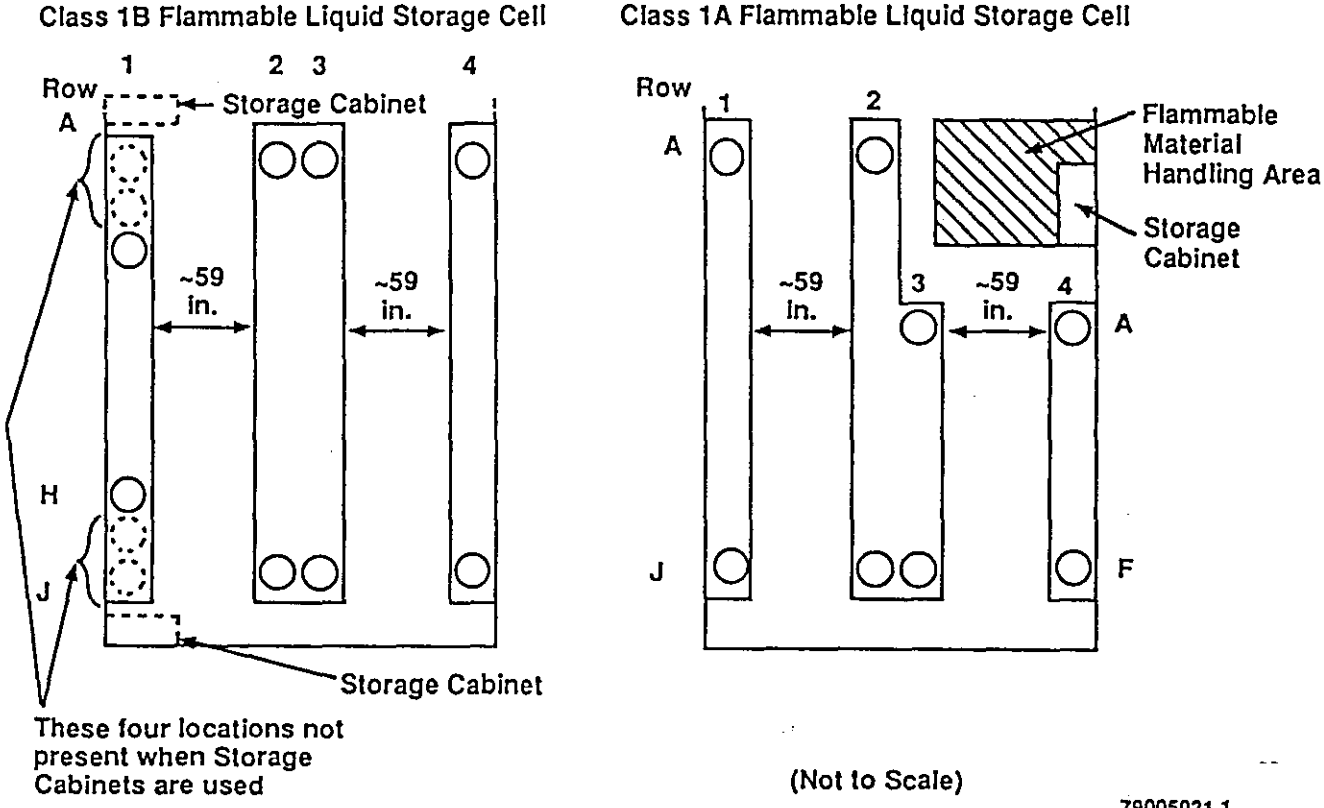
*A flammable liquid storage cabinet(s) can be used in the Class 1B storage cell resulting in the following arrangement:

36 (55 gal) (208.2 liters) 1 flammable liquid storage cabinet (135 gal) (512 liters)	36 (30 gal)[d] (113.6 liters)	or	34 (55 gal) (208.2 liters) 2 flammable liquid storage cabinets (170 gal) (1,024 liters)	34 (30 gal) (113.6 liters)

Because the total volume stored in this configuration [3,195 gal (12,094.4 liters)] is less than the other [3,400 gal (12,870.4 liters)], the volume is not listed in Table 4-2. Table 4-4 also is based on the maximum volume stored.

ENCLOSURE 2
ATTACHMENT 12

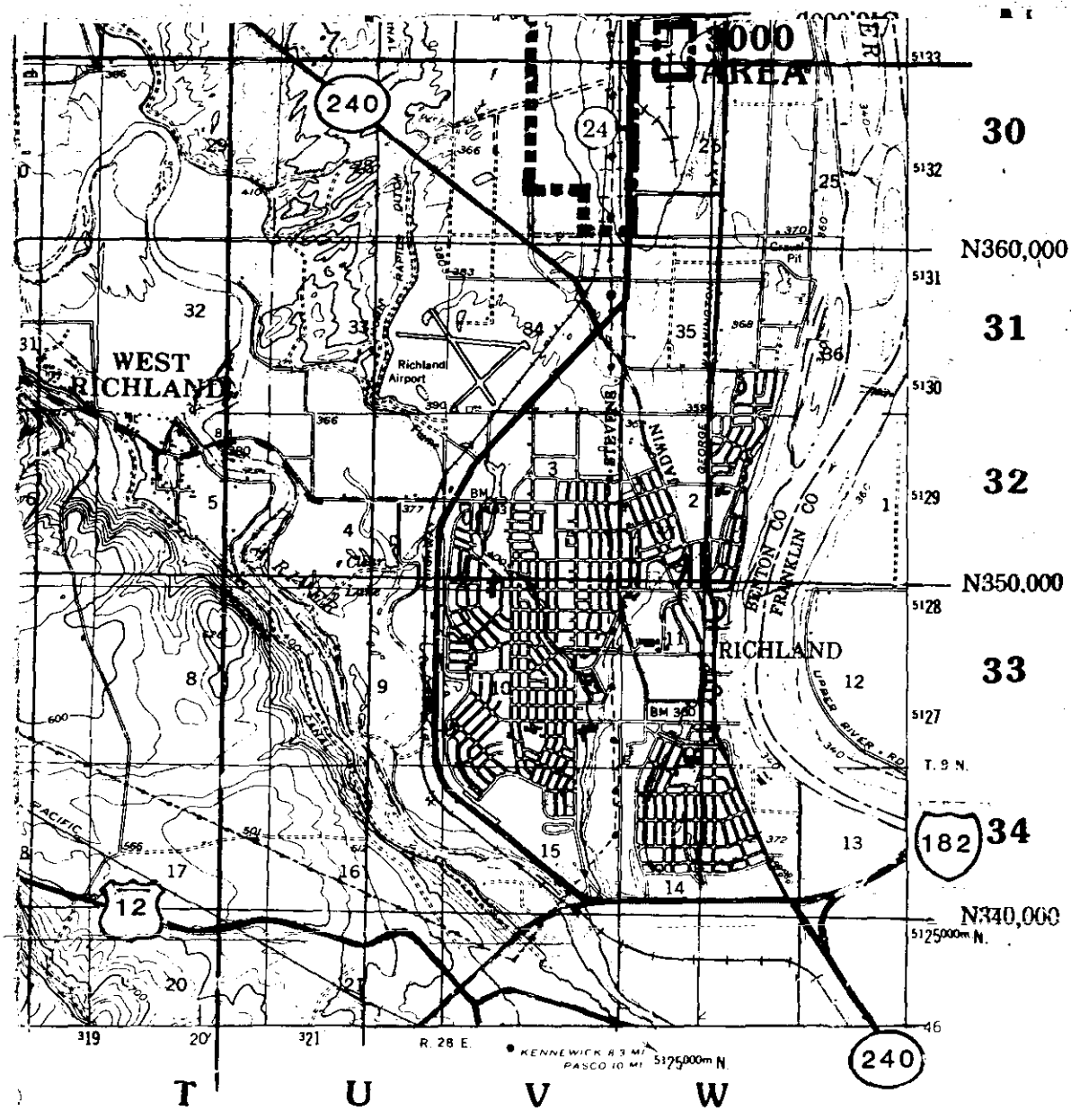




79005021.1

Figure 6-3. Current Container Storage Layout.

ENCLOSURE 2
ATTACHMENT 13



DRAWING APPROVALS	DATE
APPD FOR QUALITY ASSURANCE	
APPD	3/89
APPD	
APPD	
RESPONSIBLE ENGINEER R.L. MARTELL	3/89
DRAFTING APPD	
CHECKED	
DRAWN K.D. JUNT	3/89

U. S. Department of Energy
Richland Operations Office

Westinghouse Hanford Company

GENERAL OVERVIEW OF HANFORD SITE

SCALE		INDEX NO.
AS SHOWN	600 GEN	0100

CLASSIFICATION	BY	DRAWING NO	SHEET NO.	SHEETS
NONE	NOT REQ'D	H-6-958	1	1

ENCLOSURE 2
ATTACHMENT 14

FACILITIES WHERE UNCONDITIONAL RELEASE SURVEY IS NOT REQUIRED

100 Area Facilities

151B
* 151D
181B
181D
182B
182D
183D

* 1707N
* A21K Switchyard
* B3S4/351 Substation

200 Area Facilities

222SA
243G4
243G5
243G6
* 272E
272W
273E
273EA
273W
274E
274W
275E
* 275W
* 277W
282E
282W
283E
283W
284E
284W
2244B
2245B
2246B
2247B
2400E
2403EA
2701A
2701EA
* 2701EC
2701ED
* 2701EF
2701WA
* 2701WC
2703E
2704S
2704W
2709W
* 2710E
* 2711E
2713E
2715E
2715EA
2715ED
2715W
* 2716E
2716S
* 2719E
2719EA
2719WA
2720W
2721E
* 2721EA
2722E
2722W
2727E
* 2727S
2727W
2728W
2750E
2751E
2752E
2753E

Trailers

M0011
* M0012
M0015
M0016
M0017
M0019
M0021
M0027
M0028
M0029
M0031
M0032
M0037
M0039
M0040
M0041
M0042
M0043
M0047
* M0048
M0056
M0104
M0107
M0201
* M0203
* M0204
M0206
* M0211
M0215
M0221
M0223
* M0232
M0234
* M0235
M0240
M0244
* M0246
Complex
M0249
M0250
M0251
M0252
M0253
M0256
M0257
M0266
M0267
M0268
M0273
* M0306
M0346
M0347
M0351
* M0354
M0355
* M0377
* M0384
M0392
M0393
M0400
M0405
M0407
M0408
M0410
M0413
M0414
M0419
* M0705
* M0720
* M0721
* M0863
M0922
M0924
* M0927
M0931
M0934
M0936
M0939
M0946
M0947
M0995
M0996

Kaiser Trailers
Includes entire Kaiser Trailer complex at 4th & Baltimore in 200 East Areas

LERF Project
Includes Trailer/Office outside 200 East, near the 810 Gate

FACILITIES WHERE UNCONDITIONAL RELEASE SURVEY IS NOT REQUIRED

300 Area Facilities

305
* 315
* 328
335/336
337 High Bay
338
* 339A
382
384
3621B
3621C
3621D
* 3701
3701A
3701D
3701L
3701R
3701S
3701T
3701U
3702
3703
3705
3707A
3707B
3707C
* 3707D
3707H
3709
3711
3713
3715
* 3717
3717B
3717C
3718
3718N
3763
3764
3765
3766
3767
3768
3769
3770
3790

Trailers

323-2
335-1
340-1
335-2
M0046
* M0052
* M0105
M0258
M0259
M0260
M0261
M0262
M0263
M0264
M0265
M0394
M0395
M0903
M0904
M0926
M0933

Substations

* 352C
* 352E
* 352F
* C354
* C351

(*)400 Area Facilities

* 427
* 427A
* 481A
* 483B
* 4701C
* 4702
* 4704 N/S
* 4706
* 4707
* 4710
* 4713B
* 4719
* 4721
* 4722B
* 4722C
* 4726
* 4727
* 4732A
* 4732B
* 4732C
* 4734B
* 4734C
* 4734D
* 4760
* 4790
* 4802
* 4862

* M0353
* M0908
* 400 Area Laydown Yard

* Substations 51 & 52

FACILITIES WHERE UNCONDITIONAL RELEASE SURVEY IS NOT REQUIRED

600 Area Facilities

251 Substation
* 2752E Substation
* 2752W Substation
622G Complex
622R Complex
* (Includes 622F)
Patrol Training Academy Facilities
M0012
M0245
* M0246
M0247
M0248
* M0254
* M0255
* TR57A/WNP1
* 6652P
* 6652R
* 6652S
616 - Non-radioactive/Dangerous Waste Storage Facility

Yakima Barricade *6290
* Wye Barricade:
* 604F
* 604G
* 604H
Battelle Observatory
609 & 609A Fire Station
McGee Ranch Site
* 699-48-9, Deepening Project Wellsite
* North Slope Area
* LIGO (Laser Interferometer Gravitational-Wave Observatory)
* White Bluffs: Bank, School, Irrigation Pump House

700 and 3000 Areas (RCHN/RCHC/RCHS)

All 700 Area Facilities
All 3000 Area Facilities: except PSL, LSL-2, EDL and RTL.
* M0905
* 3220 (Communications Bldg)

1100 Area Facilities (RCHN/RCHC/RCHS/KENN)

HAPO

PSL - 1120

Sky Park (Tech Trng Ctr), except for Bay 1816

* Stevens Center

TCPC

Vitro

1100 Jadwin
1135 Jadwin

* 1154 Jadwin
* 1155 Jadwin (712 Swift3)

1163 Jadwin
1167 Jadwin
1170 Jadwin
1171 Offices
1201 Jadwin

* Finance Center (Kenn)

ENCLOSURE 2
ATTACHMENT 15

APPENDIX 4B

DESIGN DRAWINGS

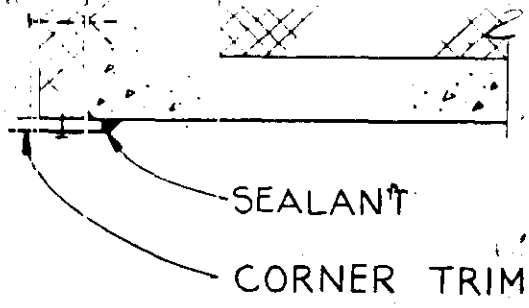
This appendix contains the following design drawings:

H-6-1552	CIVIL/DWG LIST SITE PLAN, SECTIONS & DETAILS	REV. 4
H-6-1553	ARCHITECTURAL PLAN, ELEVATIONS & SECTIONS	REV. 3
H-6-1554	ARCHITECTURAL PLAN, ELEVATIONS AND DETAILS	REV. 3
H-6-1555	ARCH PLAN, SCHED, DETAILS & SECTIONS	REV. 3
H-6-1556	STRUCTURAL PLAN & SECTIONS ECN 191786 (10/28/93) ECN 176589 (11/16/93) ECN 605639 (01/17/94) ECN 605649 (08/01/94)	REV. 4
H-6-1557	STRUCTURAL ELEVATION, DETAILS & SECTIONS (SHEET 1 OF 2) ECN 41129 (01/08/87)	REV. 3
H-6-1557	STRUCTURAL ELEVATION, DETAILS & SECTIONS (SHEET 2 OF 2)	REV. 1
H-6-1558	STRUCTURAL PLAN, SECTIONS, EL & DETAILS	REV. 2
H-6-1559	HVAC/PIPING PLANS, ELEVATION & SECTIONS (SHEET 1 OF 3) ECN 605641 (04/25/94)	REV. 4
H-6-1559	HVAC/PIPING PLANS, ELEVATION & SECTIONS (SHEET 2 OF 3) ECN 173594 (05/20/93)	REV. 2
H-6-1559	HVAC/PIPING PLANS, ELEVATION & SECTIONS (SHEET 3 OF 3) ECN 173588 (10/22/92)	REV. 3
H-6-1560	ELEC/PIPING EL, SECT, DIAG, SCHED & DET	REV. 4
H-6-1561	ELECTRICAL PLANS, EL, DIAG & DET ECN 600761 (09/09/93) ECN 602660 (11/10/93)	REV. 5
H-6-1608	ELECTRICAL RADIO FIRE ALARM PLAN AND DIAGRAM	REV. 3
H-6-10610	FIRE PROTECTION SPRINKLER SYSTEM (SHEET 1 OF 2)	REV. 0
H-6-10610	FIRE PROTECTION SPRINKLER SYSTEM (SHEET 2 OF 2)	REV. 0

~~Note: Revised design drawings currently are being prepared to address the 616 NRDWSF changes. These changes include the following:~~

- ~~Installation of a blind flange on the sink in the packaging and sampling room~~
- ~~Installation of locking mechanisms on the drain plugs in the trenches of the loading areas~~
- ~~Revision of the floor plan to reflect the switching of the acid cell and combustible cell~~
- ~~General revision of the drawings to address current operation.~~

~~On completion, the revised drawings will be included in the permit application.~~



WALL CORNER DETAIL 10

SCALE: 1 1/2" = 1'-0"

H-6-1553

B

CE LEVEL C: PHYSICAL VERIFICATION OF VISUAL OBSERVATIONS ONLY THAT DEPICTED ITEMS ARE PHYSICALLY INSTALLED IN THEIR RELEVANT LOCATIONS.

		DATE
RHO APPROVAL BY	J. J. Noble	7/24/85
PROJ ENGR		7/24/85
QA		
APPROVED BY		6/24/85
SAFETY		6/21/85
APPROVED BY		6/14
CHECKED BY	P. C. SPILMAN	6/18/85
DRAWN BY	A. L. EDWARDS	4/15/85
DESIGNED BY	INES	4/8/85
CLASSIFICATION	BY	
NONE	NOT REQD	

U. S. DEPARTMENT OF ENERGY
Richland Operations Office
KAISER ENGINEERS HANFORD COMPANY

ARCH
PLAN, SCHED, DETAILS & SECTIONS

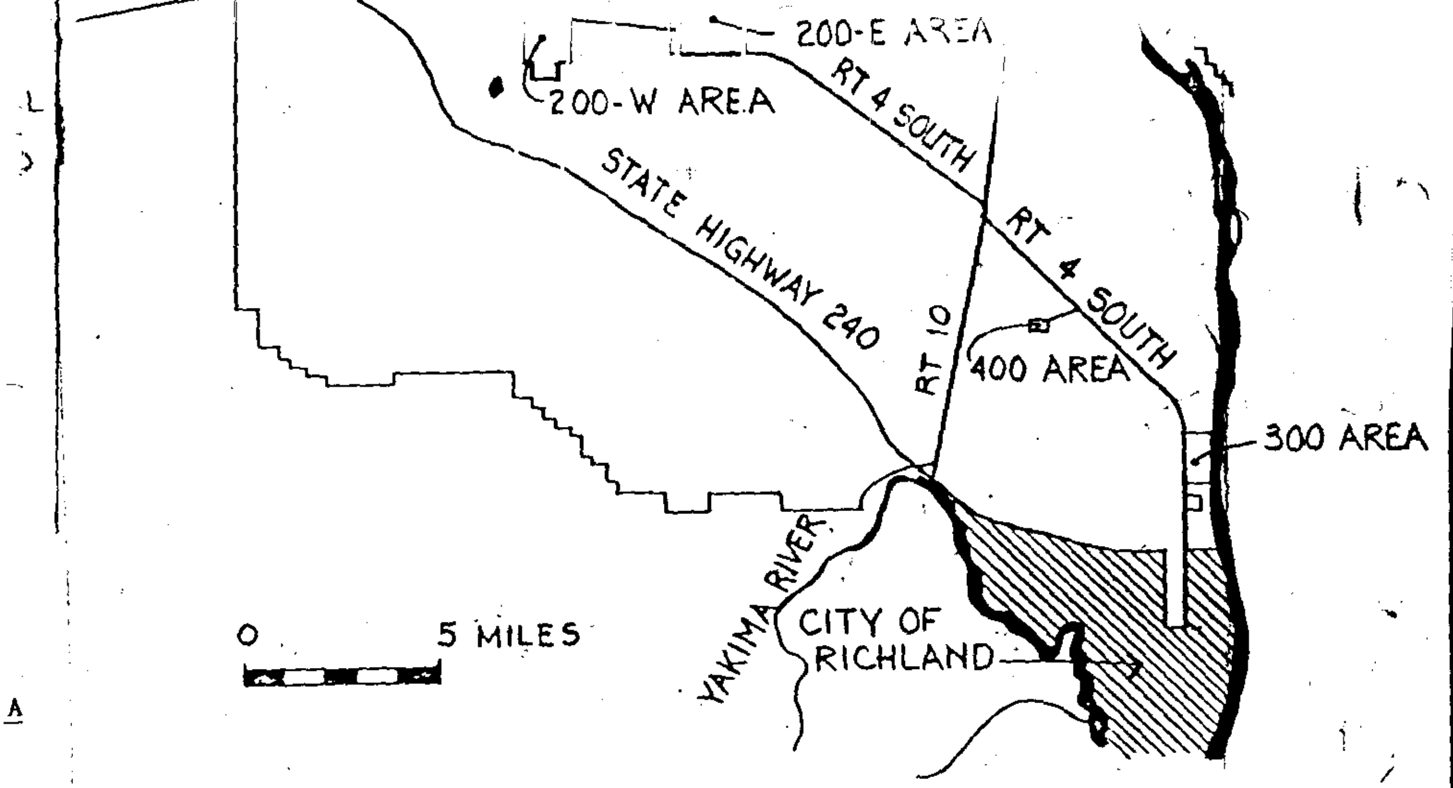
A

PROJECT TITLE: NON-RADIOACTIVE HAZARDOUS CHEMICAL WASTE FACILITY

PROJ	WO	JOB
B-526	X52602	R688A2
SCALE: SHOWN	BLDG: 616	INDEX: 0800,0801,0802

DRAWING NUMBER	SHEET	OF	REV
H-6-1555	1	1	3

2 1



B

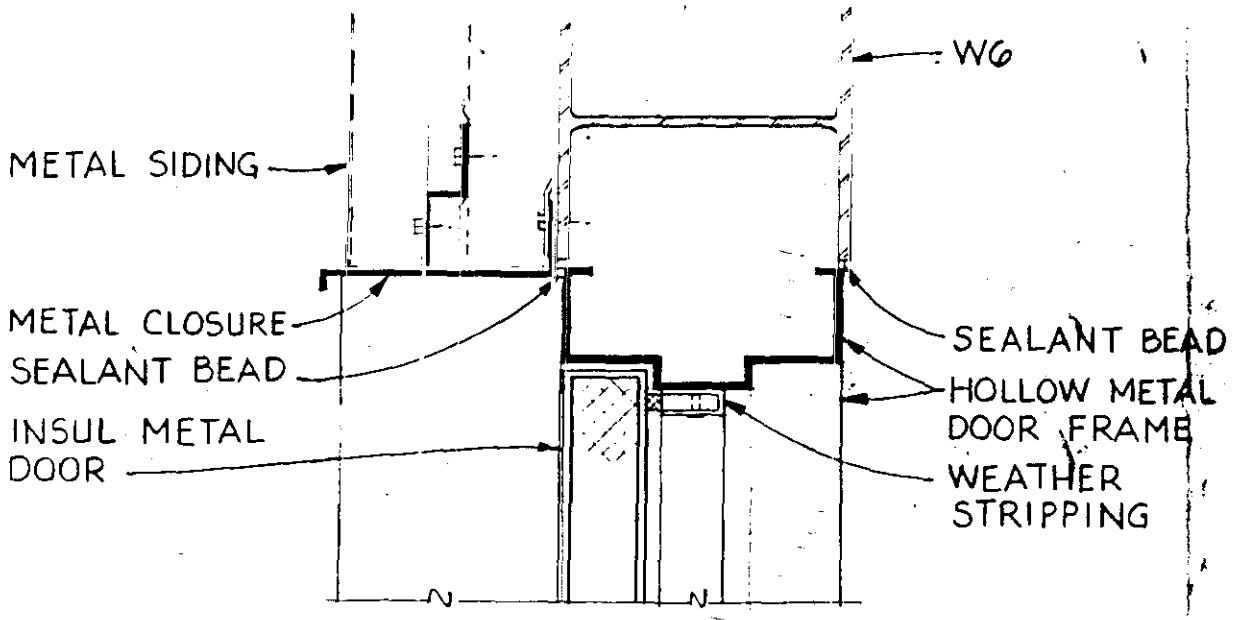
ESSENTIAL DRAWING

4 CONFIDENCE LEVEL A: CRITICAL DIMENSIONS ARE VERIFIED WITHIN SPECIFIED DRAWING TOLERANCES. CONCEALED PIPING OR WIRING IS VERIFIED AS TO FLOW PATH, BUT ACTUAL ROUTING IS NOT VERIFIED.

A

REV		DATE	
	RHO APPROVAL BY J. J. Noble	7/24/85	U. S. DEPARTMENT OF ENERGY Richland Operations Office
			KAISER ENGINEERS HANFORD COMPANY
4	PROJ ENGR [signature]	7/24/85	CIVIL / DWG LIST SITE PLAN, SECTIONS & DETAILS
	QA [signature]	[illegible]	
3	APPROVED BY [signature]	7/14/85	
	SAFETY U. S. Minister	5/21/85	
2	APPROVED BY [signature]	6/18	PROJECT TITLE NON-RADIOACTIVE HAZARDOUS CHEMICAL WASTE FACILITY
	CHECKED BY C. SAVARD / CAING	6/14/85 / 6/18/85	PROJ B-526 · WO X52602 · JOB RG88A2
	DRAWN BY C. MCGOUGH	4/15/85	
	DESIGNED BY MA HAQ	4/12/85	SCALE SHOWN · BLDG 616 · INDEX 0000,0110,8001
	CLASSIFICATION NONE	BY NOT REQD	DRAWING NUMBER H-6-1552 · SHEET 1 OF 1 · REV 4

4



DOOR HEAD

16

SCALE: 3" = 1' - 0"

H-6-1553

B

LEVEL C: PHYSICAL VERIFICATION OF VISUAL OBSERVATIONS ONLY
SPECIFIED ITEMS ARE PHYSICALLY INSTALLED IN THEIR RELEVANT LOCATIONS.

RHO APPROVAL BY		DATE
PROJ ENGR		7/24/85
QA		
APPROVED BY		6/14/85
SAFETY		6/21/85
APPROVED BY		6/14
CHECKED BY	P.C. SPILMAN	6/18/85
DRAWN BY	SNES	4/15/85
DESIGNED BY	SNES	3/21/85
CLASSIFICATION	BY	
NONE	NOT REQD	

U. S. DEPARTMENT OF ENERGY
Richland Operations Office
KAISER ENGINEERS HANFORD COMPANY

ARCHITECTURAL PLAN, ELEVATIONS & DETAILS

A

PROJECT TITLE: NON-RADIOACTIVE HAZARDOUS CHEMICAL WASTE FACILITY

PROJ	WO	JOB
B-526	X52602	R688A2
SCALE: SHOWN	BLDG: 616	INDEX: 0801

DRAWING NUMBER	SHEET	OF	REV
H-6-1554	1	1	3

2 1

GENERAL NOTES:

1. ALL BOLTS FOR STRUCTURAL STEEL CONNECTIONS ARE 5/8" DIAMETER (ASTM A 325).

2. THE EXPANSION BOLTS HAVE THE FOLLOWING MINIMUM EMBEDMENT LENGTHS UNLESS NOTED OTHERWISE:

   2-1/2" LONG FOR 3/8" DIAMETER BOLTS

   3-1/2" LONG FOR 1/2" DIAMETER BOLTS

3. MINIMUM CONCRETE COVER FOR REINFORCEMENT SHALL BE AS FOLLOWS:

   CONCRETE CAST AGAINST EARTH = 3"

   CONCRETE EXPOSED TO EARTH OR WEATHER = 1-1/2"

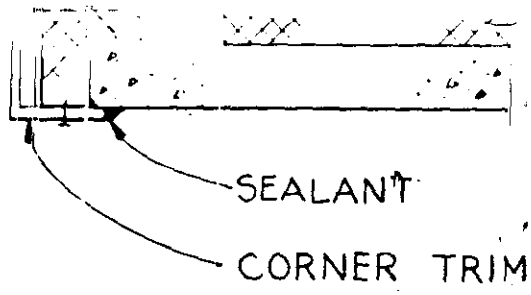
4. THE CONSTRUCTION OF SEPTIC TANK AND PERFORATED PIPES IN DRAIN FIELD SHALL BE IN ACCORDANCE WITH SPECIFICATION AND REQUIREMENTS CONFORMING TO EPA MANUAL NO. EPA 625/1-80-012.

5. ALL CONCRETE SLABS WITH EXTERIOR VERTICAL SURFACES SHALL HAVE EXPANSION JOINTS. (SEE DRAWING H-6-1556, DETAIL 1 FOR EXPANSION JOINT DETAIL.)

6. SEE SPECIFICATION B-526-C1 FOR MATERIAL DESCRIPTION AND INSTALLATION INSTRUCTIONS.

7. METAL RAMP INSTALLED. PAINTED W/ PITTSBURG "AQUAPON", TWO-PART EPOXY; 97-3 COMPONENT 1; AND 97-98 COMPONENT 2. NON-SKID COMPONENT IS TEX SHELL.

110 APPROVAL BY J. J. Noble	DATE 7/24/85	U. S. DEPARTMENT OF ENERGY Richland Operations Office KAISER ENGINEERS HANFORD COMPANY
PROJ ENGR F. K. Hamada	7-24-85	STRUCTURAL PLAN & SECTIONS
QA C. H. Brashear	6/21/85	
APPROVED BY Eugene E. Erdmann	6/14/85	
SAFETY W. D. Minister	6/21/85	
APPROVED BY Eugene E. Erdmann	6/14	
CHECKED BY EAING	6/18/85	PROJECT TITLE NON-RADIOACTIVE HAZARDOUS CHEMICAL WASTE FACILITY
DRAWN BY C. MCGOUGH	3-22-85	PROJ B-526 / WO X52602 / JOB R688A2
DESIGNED BY M. HAQ	3-20-85	SCALE SHOWN / BLDG 616 / INDEX 0900, 4100
CLASSIFICATION: NONE / BY: NOT REQD		DRAWING NUMBER H-6-1556 / SHEET 1 / OF 2 / REV 4



WALL CORNER DETAIL 10

SCALE: 1 1/2" = 1'-0" H-6-1553

B

LEVEL C: PHYSICAL VERIFICATION OF VISUAL OBSERVATIONS ONLY THAT DEPICTED ITEMS ARE PHYSICALLY INSTALLED IN THEIR RELEVANT LOCATIONS.

A

RHO APPROVAL BY J. J. Noble	DATE 7/24/85	**U. S. DEPARTMENT OF ENERGY** **Richland Operations Office** **KAISER ENGINEERS HANFORD COMPANY**
PROJ ENGR [illegible]	7/24/85	ARCH PLAN, SCHED, DETAILS & SECTIONS
QA [illegible]	[illegible]	
APPROVED BY [illegible]	6/14/85	
SAFETY [illegible]	6/21/85	
APPROVED BY [illegible]	6/14	PROJECT TITLE NON-RADIOACTIVE HAZARDOUS CHEMICAL WASTE FACILITY
CHECKED BY P.C. SPILMAN	6/18/85	PROJ B-526 / WO X52602 / JOB R688A2
DRAWN BY A.L. EDWARDS	4/15/85	SCALE SHOWN / BLDG 616 / INDEX 0800, 0801, 0802
DESIGNED BY INES	4/8/85	
CLASSIFICATION NONE / BY NOT REQD		DRAWING NUMBER H-6-1555 / SHEET 1 / OF 1 / REV 3

2 1

ENGINEERING CHANGE NOTICE

1. ECN 605649

Proj. ECN FILE COPY

2. ECN Category (mark one)	3. Originator's Name, Organization, MSIN, and Telephone No.	4. Date
Supplemental [X] Direct Revision [] Change ECN [] Temporary [] Standby [] Supersedure [] Cancel/Void []	D.B. BODILY, 87250, T4-03, 373-2188 A130A	8-1-94
	5. Project Title/No./Work Order No.: INSTALL SCISSOR LIFT GUARDS	6. Bldg./Sys./Fac. No.: 616
	7. Approval Designator: N/A	
	8. Document Numbers Changed by this ECN (includes sheet no. and rev.): SEE BLOCK 12. ~~N/A~~ SBB 8/2/94	9. Related ECN No(s.): N/A
	10. Related PO No.: N/A	

11a. Modification Work	11b. Work Package No.	11c. Modification Work Complete	11d. Restored to Original Condition (Temp. or Standby ECN only)
[X] Yes (fill out Blk. 11b) [] No (NA Blks. 11b, 11c, 11d)	2X-94-331	Cog. Engineer Signature & Date	N/A Cog. Engineer Signature & Date

12. Description of Change

Revise drawing H-6-1556 sheet ~~2, rev. 0~~ 1 Rev. 4 SBB per telecon 8/2/94 DMC to add scissor lift personnel guard rails per clouded areas on page 3 of this ECN.

Reinstate(Redraw) H-6-1556 Sheet 2 at Revision 2 to reflect information contained in ECN-191786 and Sheet 3 of this ECN. Also add additional sheets as necessary.

13a. Justification (mark one)							
Criteria Change	[]	Design Improvement	[X]	Environmental	[]	As-Found	[]
Facilitate Const.	[]	Const. Error/Omission	[]	Design Error/Omission	[]		

13b. Justification Details

Installation of the personnel guards protect operators from potential pinch points on the scissor lift.

DESIGN VERIFIED BY INDEPENDENT REVIEW.

14. Distribution (include name, MSIN, and no. of copies)

D.B. Bodily, T4-03, 1
S. Griffin, T4-03, 1 (file copy)
S. Turner, T4-06, 1
CDWS #3, S2-05, 1
CDWS #4, R1-29, 1
CDWS #20, T4-00, 1

RELEASE STAMP

OFFICIAL RELEASE (12)
BY WHC
DATE AUG 03 1994
Sta # 6

A-7900-013-2 (06/94) GEF095

A-7900-013-1 (06/92)

15. Design Verification Required	16. Cost Impact				17. Schedule Impact (days)	
	ENGINEERING		CONSTRUCTION			
[X] Yes	Additional [] $ N/A		Additional [] $		Improvement [] N/A	
[ ] No	Savings [] $		Savings [] $		Delay []	

18. Change Impact Review: Indicate the related documents (other than the engineering documents identified on Side 1) that will be affected by the change described in Block 12. Enter the affected document number in Block 19.

SDD/DD	[]	Seismic/Stress Analysis	[]	Tank Calibration Manual	[]
Functional Design Criteria	[]	Stress/Design Report	[]	Health Physics Procedure	[]
Operating Specification	[]	Interface Control Drawing	[]	Spares Multiple Unit Listing	[]
Criticality Specification	[]	Calibration Procedure	[]	Test Procedures/Specification	[]
Conceptual Design Report	[]	Installation Procedure	[]	Component Index	[]
Equipment Spec.	[]	Maintenance Procedure	[]	ASME Coded Item	[]
Const. Spec.	[]	Engineering Procedure	[]	Human Factor Consideration	[]
Procurement Spec.	[]	Operating Instruction	[]	Computer Software	[]
Vendor Information	[]	Operating Procedure	[]	Electric Circuit Schedule	[]
OM Manual	[]	Operational Safety Requirement	[]	ICRS Procedure	[]
FSAR/SAR	[]	IEFD Drawing	[]	Process Control Manual/Plan	[]
Safety Equipment List	[]	Cell Arrangement Drawing	[]	Process Flow Chart	[]
Radiation Work Permit	[]	Essential Material Specification	[]	Purchase Requisition	[]
Environmental Impact Statement	[]	Fac. Proc. Samp. Schedule	[]	Tickler File	[]
Environmental Report	[]	Inspection Plan	[]		[]
Environmental Permit	[] N/A	Inventory Adjustment Request	[] N/A		[] N/A

19. Other Affected Documents: (NOTE: Documents listed below will not be revised by this ECN.) Signatures below indicate that the signing organization has been notified of other affected documents listed below.

Document Number/Revision	Document Number/Revision	Document Number Revision
N/A		

20. Approvals

Signature	Date	Signature	Date
OPERATIONS AND ENGINEERING		ARCHITECT-ENGINEER	
Cog. Eng. D.B. Bodily	8/2/94	PE	
Cog. Mgr. MD Powell	8/2/94	QA	
QA		Safety	
Safety		Design	
Environ.		Environ.	
Other		Other	
INDP. REVIEW C.L. JACKSON	8/2/94		
		DEPARTMENT OF ENERGY	
		Signature or a Control Number that tracks the Approval Signature	
		ADDITIONAL	

GENERAL NOTES:

1. ALL BOLTS FOR STRUCTURAL STEEL CONNECTIONS ARE 5/8" DIAMETER (ASTM A 325).

2. THE EXPANSION BOLTS HAVE THE FOLLOWING MINIMUM EMBEDMENT LENGTHS UNLESS NOTED OTHERWISE:

   2-1/2" LONG FOR 3/8" DIAMETER BOLTS

   3-1/2" LONG FOR 1/2" DIAMETER BOLTS

3. MINIMUM CONCRETE COVER FOR REINFORCEMENT SHALL BE AS FOLLOWS:

   CONCRETE CAST AGAINST EARTH = 3"

   CONCRETE EXPOSED TO EARTH OR WEATHER = 1-1/2"

4. THE CONSTRUCTION OF SEPTIC TANK AND PERFORATED PIPES IN DRAIN FIELD SHALL BE IN ACCORDANCE WITH SPECIFICATION AND REQUIREMENTS CONFORMING TO EPA MANUAL NO. EPA 625/1-80-012.

5. ALL CONCRETE SLABS WITH EXTERIOR VERTICAL SURFACES SHALL HAVE EXPANSION JOINTS. (SEE DRAWING H-6-1556, DETAIL 1 FOR EXPANSION JOINT DETAIL.)

6. SEE SPECIFICATION B-526-C1 FOR MATERIAL DESCRIPTION AND INSTALLATION INSTRUCTIONS.

7. METAL RAMP INSTALLED. PAINTED W/ PITTSBURG "AQUAPON" TWO-PART EPOXY; 97-3 COMPONENT 1; AND 97-98 COMPONENT 2. NON-SKID COMPONENT IS TEX SHELL.

AWING

B

A

HO APPROVAL BY [signature]	DATE 7/24/85
PROJ ENGR [signature]	7/24/85
QA [signature]	9/21/85
APPROVED BY [signature]	6/14/85
SAFETY [signature]	6/21/85
APPROVED BY [signature]	6/14
CHECKED BY EAING	6/18/85
DRAWN BY C. MCGOUGH	3-22-85
DESIGNED BY M. HAQ	3-20-85
CLASSIFICATION NONE	BY NOT REQD

U. S. DEPARTMENT OF ENERGY
Richland Operations Office
KAISER ENGINEERS HANFORD COMPANY

STRUCTURAL PLAN & SECTIONS

PROJECT TITLE NON-RADIOACTIVE HAZARDOUS CHEMICAL WASTE FACILITY

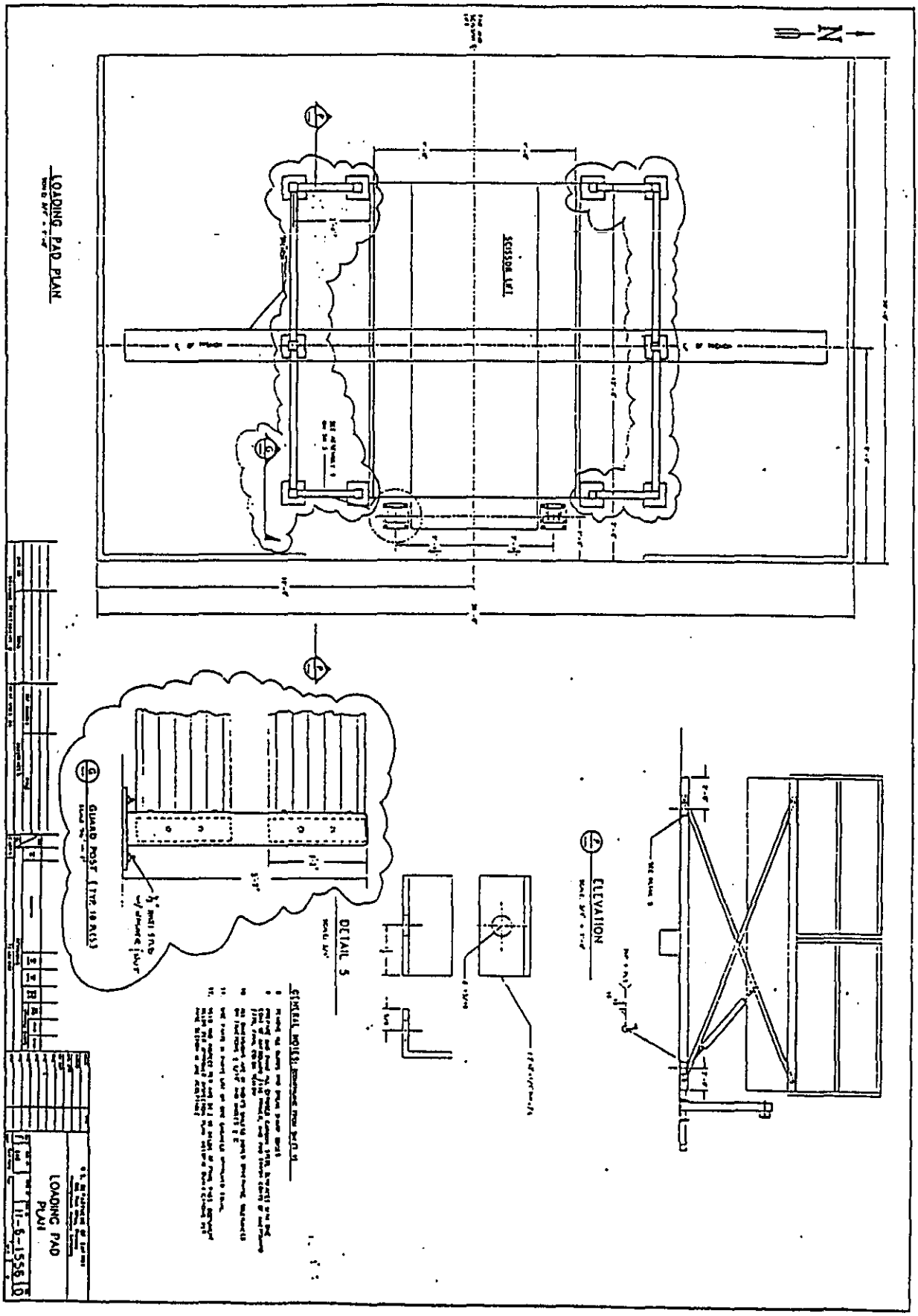
PROJ	WO	JOB
B-526	X52602	R688A2
SCALE SHOWN	BLDG 616	INDEX 0900, 1000

DRAWING NUMBER	SHEET	OF	REV
H-6-1556	1	2	4

4

REV

2 1



ENGINEERING CHANGE NOTICE

FILE COPY

Page 1 of 5

1. ECN 191786

Proj. ECN

2. ECN Category (mark one)	3. Originator's Name, Organization, MSIN, and Telephone No.		4. Date
Supplemental [X] Direct Revision [] Change ECN [] Temporary [] Standby [] Supersedure [] Cancel/Void []	D.B. Bodily, 87250, T4-03, 373-2188		10/28/93
	5. Project Title/No./Work Order No. 616 LIFTING PLATFORM	6. Bldg./Sys./Fac. No. 616	7. Impact Level 3SQ
	8. Document Numbers Changed by this ECN (includes sheet no. and rev.) SEE BLOCK 12	9. Related ECN No(s). N/A	10. Related PO No. N/A

11a. Modification Work	11b. Work Package No.	11c. Modification Work Complete	11d. Restored to Original Condition (Temp. or Standby ECN only)
[X] Yes (fill out Blk. 11b) [] No (NA Blks. 11b, 11c, 11d)	2X-93-00231	JUN 13 1994 D.B. Bodily 5/17/94 Cog. Engineer Signature & Date	N/A Cog. Engineer Signature & Date

12. Description of Change

1) Add a sheet 2 and sheet 3 to drawing H-6-1556 Rev. 3. SHT. 1

2) Add drawings and details on page 3 of this ECN to sheet 2 of drawing H-6-1556 Rev. 0.

3) Add assembly and detail drawings on page 4 of this ECN to sheet 3 of drawing H-6-1556 Rev. 0.

4) Add information per the clouded area on page 5 of this ECN to drawing H-6-1556 Rev. 3

13a. Justification (mark one)							
Criteria Change	[]	Design Improvement	[X]	Environmental	[]		
As-Found	[]	Facilitate Const.	[]	Const. Error/Omission	[]	Design Error/Omission	[]

13b. Justification Details

These drawings and details document the location of the lifting platform at 616.

14. Distribution (include name, MSIN, and no. of copies)

D.B. Bodily, T4-03, 1
S. Griffin, T4-03, 1 (File copy)
S. Turner, T4-06, 1
J. Elliott, T4-06, 1

STA #4 R1-29
STA #3 S2-05
STA #20 T4-00

RELEASE STAMP

OFFICIAL RELEASE BY WHC 63

DATE NOV 04 1993

Sta #6

A-7900-013-2 (06/92) GEF095

SUPPORT 9413294.2007

ENGINEERING CHANGE NOTICE	Page 2 of 5	1. ECN (use no. from pg. 1) 191786

15. Design Verification Required	16. Cost Impact		17. Schedule Impact (days)
	ENGINEERING	CONSTRUCTION	
[X] Yes	Additional [] $	Additional [] $	Improvement []
[] No	Savings [] $ N/A	Savings [] $ N/A	Delay [] N/A

18. Change Impact Review: Indicate the related documents (other than the engineering documents identified on Side 1) that will be affected by the change described in Block 12. Enter the affected document number in Block 19.

SDD/DD	[]	Seismic/Stress Analysis	[]	Tank Calibration Manual	[]
Functional Design Criteria	[]	Stress/Design Report	[]	Health Physics Procedure	[]
Operating Specification	[]	Interface Control Drawing	[]	Spares Multiple Unit Listing	[]
Criticality Specification	[]	Calibration Procedure	[]	Test Procedures/Specification	[]
Conceptual Design Report	[]	Installation Procedure	[]	Component Index	[]
Equipment Spec.	[]	Maintenance Procedure	[]	ASME Coded Item	[]
Const. Spec.	[]	Engineering Procedure	[]	Human Factor Consideration	[]
Procurement Spec.	[]	Operating Instruction	[]	Computer Software	[]
Vendor Information	[]	Operating Procedure	[]	Electric Circuit Schedule	[]
OM Manual	[]	Operational Safety Requirement	[]	ICRS Procedure	[]
FSAR/SAR	[]	IEFD Drawing	[]	Process Control Manual/Plan	[]
Safety Equipment List	[]	Cell Arrangement Drawing	[]	Process Flow Chart	[]
Radiation Work Permit	[]	Essential Material Specification	[]	Purchase Requisition	[]
Environmental Impact Statement	[]	Fac. Proc. Samp. Schedule	[]		[]
Environmental Report	[] N/A	Inspection Plan	[] N/A		[] N/A
Environmental Permit	[]	Inventory Adjustment Request	[]		[]

19. Other Affected Documents: (NOTE: Documents listed below will not be revised by this ECN.) Signatures below indicate that the signing organization has been notified of other affected documents listed below.

Document Number/Revision	Document Number/Revision	Document Number Revision
N/A		

20. Approvals

	Signature	Date		Signature	Date
OPERATIONS AND ENGINEERING			ARCHITECT-ENGINEER		
Cog Engineer	D. B. Bailey	10/28/93	PE		
Cog. Mgr.	[signature]	11/2/93	QA		
QA	[signature] Elliott	11-2-93	Safety		
Safety	[signature]	11-4-93	Design		
Security			Environ.		
Environ.			Other		
Projects/Programs					
Tank Waste Remediation System					
Facilities Operations			DEPARTMENT OF ENERGY		
Restoration & Remediation			Signature or Letter No.		
Operations & Support Services					
IRM			ADDITIONAL		
Other Ind. Rep.	P. M. Rakords	10/28/93			
	[signature]	11-2-93			

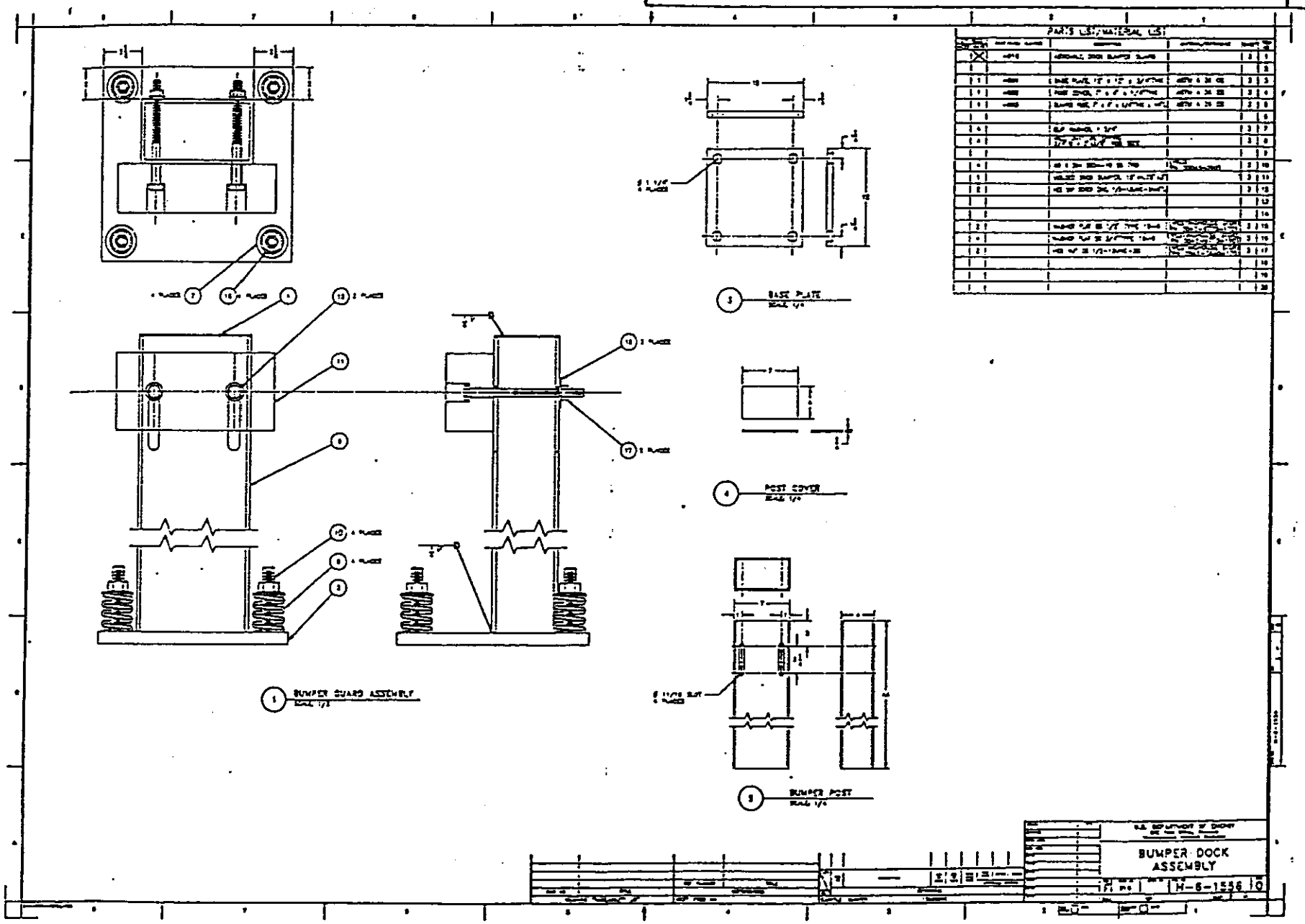
9413290.2928

9413294.2929

ENGINEERING CHANGE NOTICE CONTINUATION SHEET

PAGE 3 OF 5

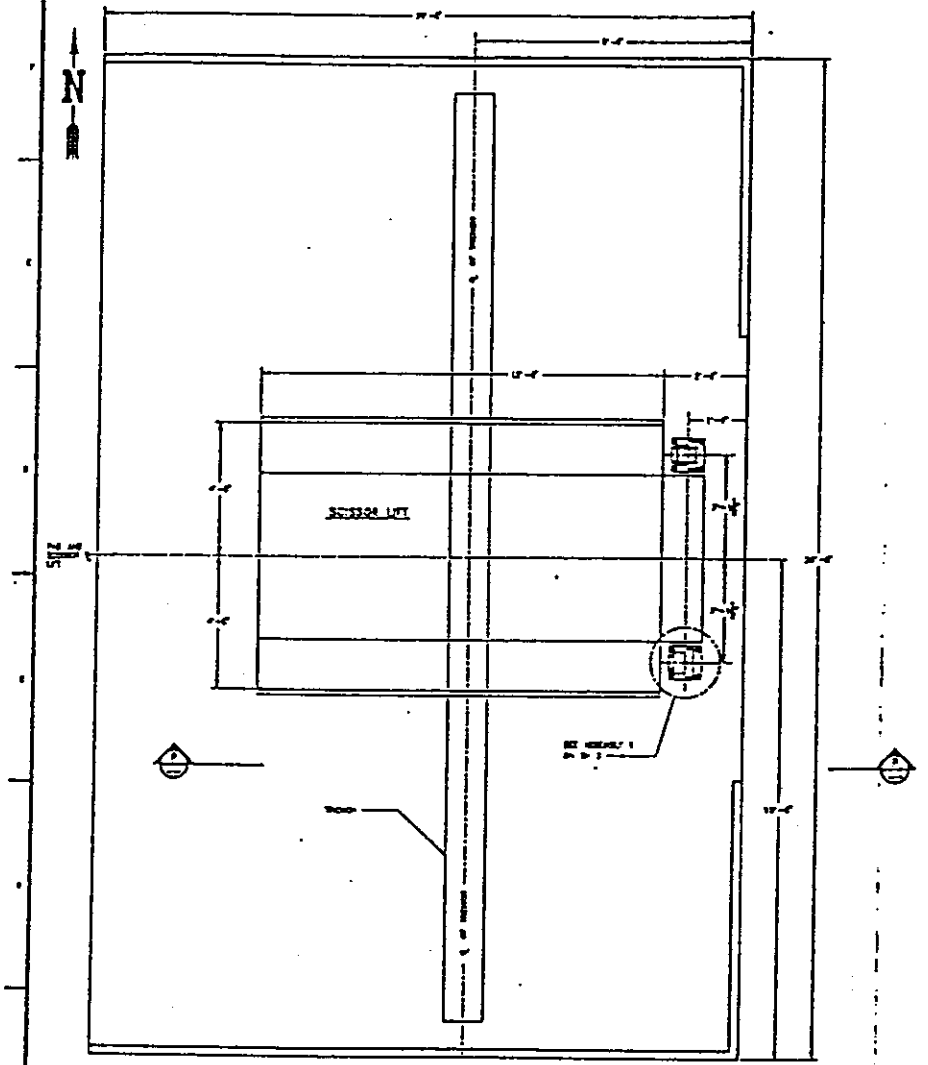
ECN 191786



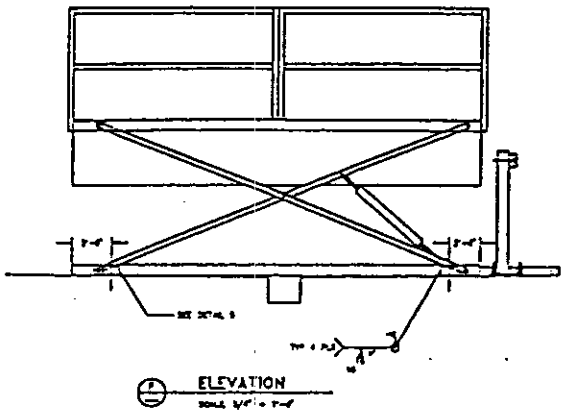
9413294.2930

ENGINEERING CHANGE NOTICE CONTINUATION SHEET PAGE 4 OF 5

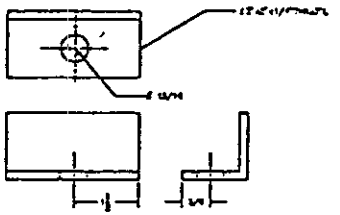
L ECN 191786



LOADING PAD PLAN



ELEVATION



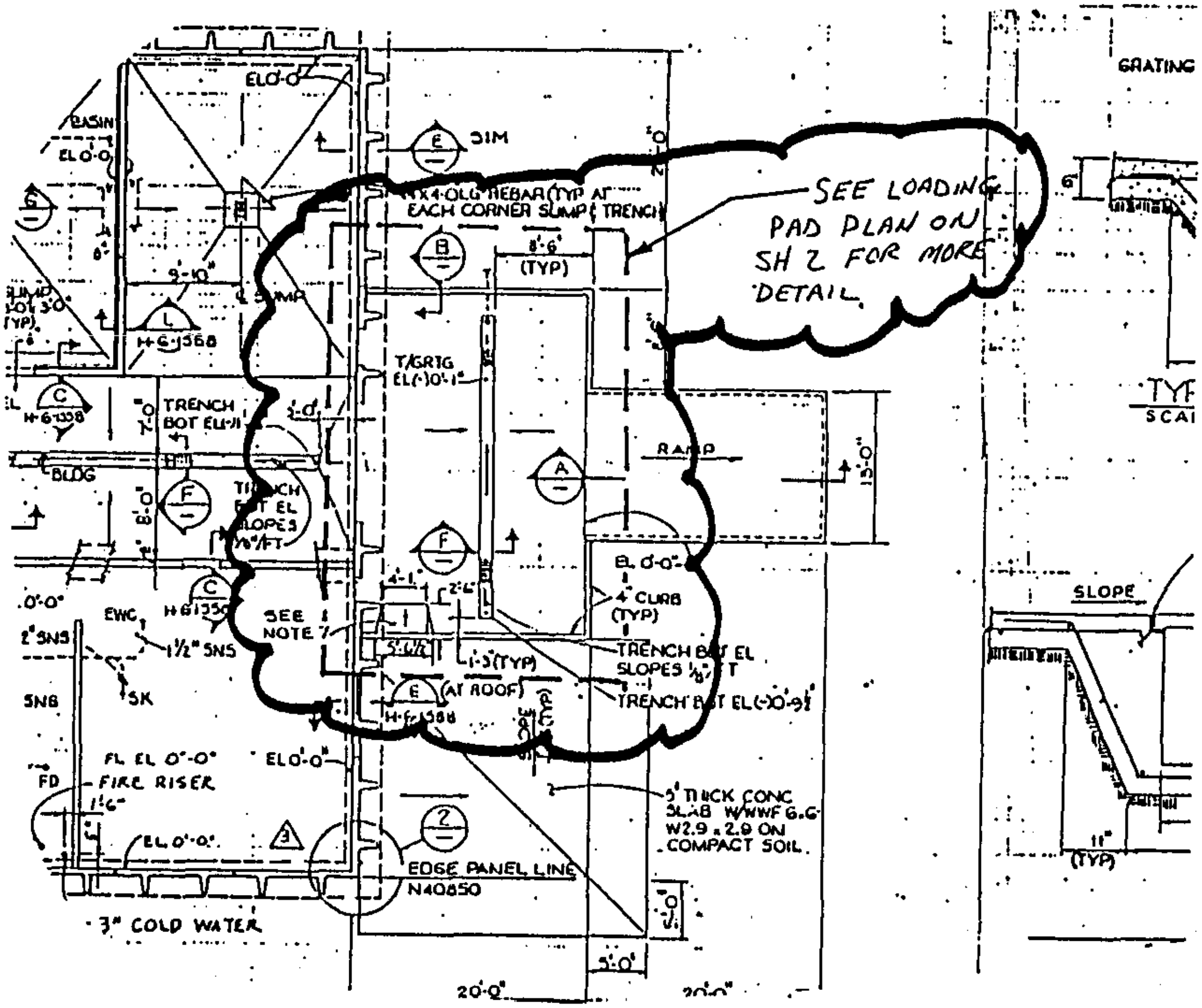
DETAIL 5

GENERAL NOTES:

LOADING PAD PLAN

H-6-1556

1. ECN 191786


SEE LOADING PAD PLAN ON SH 2 FOR MORE DETAIL
GRATING
SIM
ELO-O
T/GRTG EL(-)0'-1"
TRENCH BOT EL(-)1'
BLDG
RAMP
13'-0"
8'-6" (TYP)
EL 0'-0"
4" CURB (TYP)
TRENCH BOT EL SLOPES 1/8"/FT
TRENCH BOT EL(-)0'-9"
SEE NOTE 7
(AT ROOF)
H-6-1358
FL EL 0'-0"
FIRE RISER
5" THICK CONC SLAB W/WWF 6.6-W2.9 x 2.9 ON COMPACT SOIL
EDGE PANEL LINE N40850
3" COLD WATER
SLOPE
11" (TYP)
5'-0"
20'-0"
SNS
SK
FD
EWC
1 1/2" SNS

WO

ENGINEERING CHANGE NOTICE FILE COPY CECN

Page 1 of 3

1. ECN 176589

Proj. ECN

2. ECN Category (mark one)	3. Originator's Name, Organization, MSIN, and Telephone No.	4. Date
Supplemental ☐ Direct Revision ☐ Change ECN ☒ Temporary ☐ Standby ☐ Supersedure ☐ Cancel/Void ☐	J.E. CONNER (C-1870), 23440, T2-03, 3-3154	Nov 16, 1993
	5. Project Title/No./Work Order No.: 616 LIFTING PLATFORM	6. Bldg./Sys./Fac. No.: 616
		7. Impact Level: 3SQ
	8. Document Numbers Changed by this ECN (includes sheet no. and rev.): H-6-1556, Rev 3, Sht 1	9. Related ECN No(s.): 191786
		10. Related PO No.: N/A

11a. Modification Work	11b. Work Package No.	11c. Modification Work Completed	11d. Restored to Original Condition (Temp. or Standby ECNs only)
☒ Yes (fill out Blk. 11b) ☐ No (NA Blks. 11b, 11c, 11d)	W/O 2H93017779F	JUN 13 1994 D.B. Bodily 5/24/94 Cog. Engineer Signature & Date	N/A Cog. Engineer Signature & Date

12. Description of Change

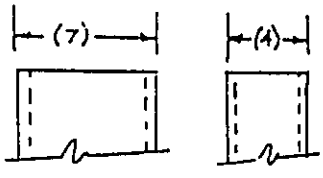
THIS ECN CHANGES ECN 191786 IN PART

(1) CHANGE THE MATERIAL/REFERENCE OF ITEM #5 (BUMPER POST), SHOWN ON ECN 191786, PAGE 3 OF 5 AS FOLLOWS:

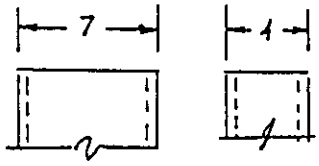
CHANGE TO --- ASTM A 500, GR. B WAS --- ASTM A 36

(2) PAGE 3 OF 5, OF ECN 191786, DETAIL OF BUMPER POST IS AS FOLLOWS:

CHANGE TO ---

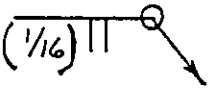


WAS ---

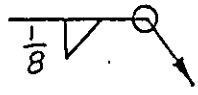


(3) PAGE 3 OF 5, OF ECN 191786, BUMPER GUARD ASSEMBLY DETAIL, WELDING OF ITEM #4 TO ITEM #5 IS AS FOLLOWS:

CHANGE TO ---



WAS ---



13a. Justification (mark one)	13b. Justification Details
Criteria Change ☐ Design Improvement ☐ Environmental ☐ As-Found ☐ Facilitate Const. ☒ Const. Error/Omission ☐ Design Error/Omission ☒	CHANGES REQUIRED TO CLARIFY WELDING, MATERIAL AND FABRICATION REQUIREMENTS.

14. Distribution (include name, MSIN, and no. of copies)

J.E. CONNER,	T2-03	D. BODILY,	T4-03
M. LACY,	T2-08	D. POWELL,	T4-03
J. BRESINA,	T2-06	A. PINES,	T4-10
STA# 4	A1-29		
STA# 3	52-05		
STA# 20	T4-00		

RELEASE STAMP

OFFICIAL RELEASE BY WHC 63

DATE NOV 18 1993

Sta #6

A-7900-013 (06/92)

SUPPORT

9413294.2932

ENGINEERING CHANGE NOTICE

1. ECN (use no. from pg. 1): 176589

15. Design Verification Required	16. Cost Impact		17. Schedule Impact (days)
	ENGINEERING	CONSTRUCTION	
☐ Yes	Additional ☐ $ N/A	Additional ☐ $ N/A	Improvement ☐ N/A
☒ No	Savings ☐ $	Savings ☐ $	Delay ☐

18. Change Impact Review: Indicate the related documents (other than the engineering documents identified on Side 1) that will be affected by the change described in Block 12. Enter the affected document number in Block 19.

SDD/DD	☐	Seismic/Stress Analysis	☐	Tank Calibration Manual	☐
Functional Design Criteria	☐	Stress/Design Report	☐	Health Physics Procedure	☐
Operating Specification	☐	Interface Control Drawing	☐	Spares Multiple Unit Listing	☐
Criticality Specification	☐	Calibration Procedure	☐	Test Procedures/Specification	☐
Conceptual Design Report	☐	Installation Procedure	☐	Component Index	☐
Equipment Spec.	☐	Maintenance Procedure	☐	ASME Coded Item	☐
Const. Spec.	☐	Engineering Procedure	☐	Human Factor Consideration	☐
Procurement Spec.	☐	Operating Instruction	☐	Computer Software	☐
Vendor Information	☐	Operating Procedure	☐	Electric Circuit Schedule	☐
OM Manual	☐	Operational Safety Requirement	☐	ICRS Procedure	☐
FSAR/SAR	☐	IEFD Drawing	☐	Process Control Manual/Plan	☐
Safety Equipment List	☐	Cell Arrangement Drawing	☐	Process Flow Chart	☐
Radiation Work Permit	☐	Essential Material Specification	☐	Purchase Requisition	☐
Environmental Impact Statement	☐	Fac. Proc. Samp. Schedule	☐		☐
Environmental Report	☐	Inspection Plan	☐	N/A	☐
Environmental Permit	☐	Inventory Adjustment Request	☐		☐

19. Other Affected Documents: (NOTE: Documents listed below will not be revised by this ECN.) Signatures below indicate that the signing organization has been notified of other affected documents listed below.

Document Number/Revision	Document Number/Revision	Document Number/Revision
N/A		

20. Approvals

	Signature	Date
OPERATIONS AND ENGINEERING		
* Cog. Engineer	B. Rodriguez for Tel. Con.	11/17/93
* Cog. Mgr.	D. Powell per Tel. Con.	11/17/93
* QA	Michael Lacy (1-4)	11/17/93
* Safety	A. Pines per Tel. Con	11/17/93
Security		
Environ.		
Projects/Programs		
Tank Waste Remediation System		
Facilities Operations		
Restoration & Remediation		
Operations & Support Services		
IRM		
Other		
Independent Reviewer		11/16/93
Requester R.R. Becker		11-17-93

	Signature	Date
ARCHITECT-ENGINEER		
PE		
QA		
Safety		
Design		
Environ.		
Other		
DEPARTMENT OF ENERGY		
Signature or Letter Number		
ADDITIONAL		
Cog. Eng. (MWE)		11/16/93

A-7900-013R (06/92)

(4) PAGE 4 OF 5 OF ECN 191786, GENERAL NOTE 12 IS AS FOLLOWS:

CHANGE TO --- 12. WELD AND INSPECT PER AWS D1.1 ... ...

WAS --- 12. WELD AND INSPECT PER AWS D1.3 ... ...

ENGINEERING CHANGE NOTICE

FILE COPY

1. ECN 605639

Proj. ECN

2. ECN Category (mark one)	3. Originator's Name, Organization, MSIN, and Telephone No. MLZWB	4. Date
Supplemental [ ] Direct Revision [ ] Change ECN [x] Temporary [ ] Standby [ ] Supersedure [ ] Cancel/Void [ ]	D. B. Bodily, 87250, T4-03, 373-2188	1/17/94
	5. Project Title/No./Work Order No. 616 LIFTING ~~2X-93-231~~ PLATFORMS	6. Bldg./Sys./Fac. No. 616	7. Impact Level 3SQ
	8. Document Numbers Changed by this ECN (includes sheet no. and rev.) See Block 12	9. Related ECN No(s). ECN 191786	10. Related PO No. N/A

11a. Modification Work	11b. Work Package No.	11c. Modification Work Complete	11d. Restored to Original Condition (Temp. or Standby ECN only)
[X] Yes (fill out Blk. 11b) [ ] No (NA Blks. 11b, 11c, 11d)	2X-93-231	JUN 13 1994 D. B. Bodily 5/24/94 Cog. Engineer Signature & Date	N/A Cog. Engineer Signature & Date

12. Description of Change

Delete all-around designation on weld symbol in elevation detail "P" on drawing H-6-1556 Sht. ~~3~~ 1 Rev. ~~0~~ 3, and add note as shown on page 3 of this ECN. 1/17/94

13a. Justification (mark one)							
Criteria Change	[ ]	Design Improvement	[ ]	Environmental	[ ]		
As-Found	[ ]	Facilitate Const.	[ ]	Const. Error/Omission	[ ]	Design Error/Omission	[x]

13b. Justification Details

Weld cannot be completed as shown in weld callout.

14. Distribution (include name, MSIN, and no. of copies)

D.B. Bodily, T4-03, 1
S. Griffin, T4-03, 1
S. Turner, T4-06, 1
J. Elliott, T4-06, 1
S+A #4 R1-29
S+A #3 52-05
S+A #20 T4.00

RELEASE STAMP

OFFICIAL RELEASE
BY WHC
DATE JAN 20 1994
55 Stale

A-7900-013-2 (06/92) GEF095

ENGINEERING CHANGE NOTICE

1. ECN (use no. from pg. 1) 605639

15. Design Verification Required	16. Cost Impact				17. Schedule Impact (days)
	ENGINEERING N/A		CONSTRUCTION		N/A
[X] Yes	Additional	[] $	Additional	[] $	Improvement []
[] No	Savings	[] $	Savings	[] $	Delay []

18. Change Impact Review: Indicate the related documents (other than the engineering documents identified on Side 1) that will be affected by the change described in Block 12. Enter the affected document number in Block 19.

SDD/DD	[]	Seismic/Stress Analysis	[]	Tank Calibration Manual	[]
Functional Design Criteria	[]	Stress/Design Report	[]	Health Physics Procedure	[]
Operating Specification	[]	Interface Control Drawing	[]	Spares Multiple Unit Listing	[]
Criticality Specification	[]	Calibration Procedure	[]	Test Procedures/Specification	[]
Conceptual Design Report	[]	Installation Procedure	[]	Component Index	[]
Equipment Spec.	[]	Maintenance Procedure	[]	ASME Coded Item	[]
Const. Spec.	[]	Engineering Procedure	[]	Human Factor Consideration	[]
Procurement Spec.	[]	Operating Instruction	[]	Computer Software	[]
Vendor Information	[]	Operating Procedure	[]	Electric Circuit Schedule	[]
OM Manual	[]	Operational Safety Requirement	[]	ICRS Procedure	[]
FSAR/SAR	[]	IEFD Drawing	[]	Process Control Manual/Plan	[]
Safety Equipment List	[]	Cell Arrangement Drawing	[]	Process Flow Chart	[]
Radiation Work Permit	[]	Essential Material Specification	[]	Purchase Requisition	[]
Environmental Impact Statement	[]	Fac. Proc. Samp. Schedule	[]		[]
Environmental Report	[] N/A	Inspection Plan	[] N/A		[] N/A
Environmental Permit	[]	Inventory Adjustment Request	[]		[]

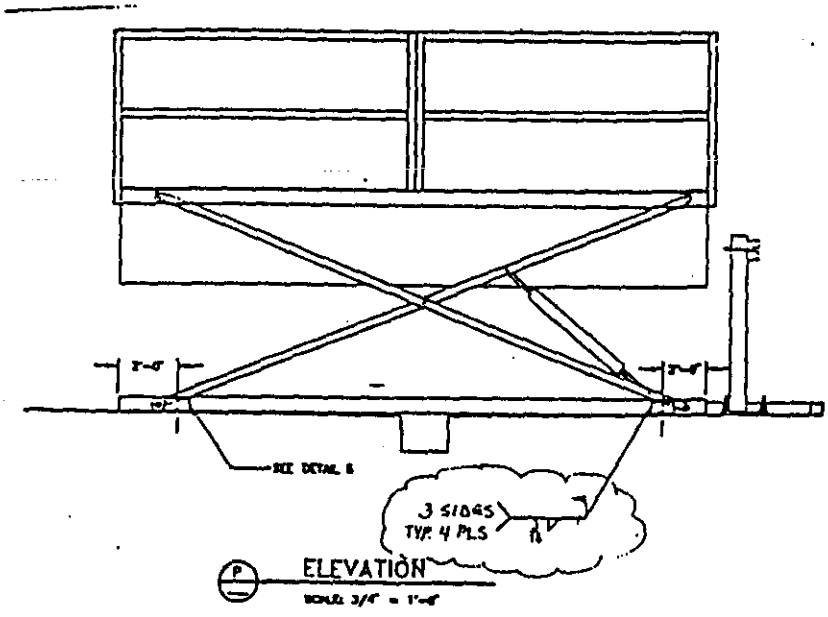
19. Other Affected Documents: (NOTE: Documents listed below will not be revised by this ECN.) Signatures below indicate that the signing organization has been notified of other affected documents listed below.

Document Number/Revision	Document Number/Revision	Document Number Revision
N/A		

20. Approvals

Signature	Date	Signature	Date
OPERATIONS AND ENGINEERING		ARCHITECT-ENGINEER	
Cog Engineer [signature]	1/17/94	PE	
Cog. Mgr. D.B. Powell	1-17-94	QA	
QA Jon Elliott	1-17-94	Safety	
Safety [signature]	1-19-94	Design	
Security		Environ.	
Environ.		Other	
Projects/Programs			
Tank Waste Remediation System			
Facilities Operations		DEPARTMENT OF ENERGY	
Restoration & Remediation		Signature or Letter No.	
Operations & Support Services			
IRM		ADDITIONAL	
Other Ind. Review P.M. Rubosh	1/17/94		

9413291.2936



9413294.2958 EO-40216 FILE COPY Sheet 1 of 4

Rockwell Hanford Operations
Richland, WA 99352

ENGINEERING ORDER

ITEM DISPOSITION		EO TYPE			
Rework	X	Release	–	Supersedure	X
Replace	–	Release To File	–	Cancellation	–
Use As Is	–	Authorize Requirements	–	Obsolete	–
Record Change	–	Change	X	File As Drawing	–
—	–				–

Impact Level	Change Type	Bldg.	Project No.
—	2	616	—

EO Nº 41129

Responsible Engineer: J.H. HUBER Phone: 3-1145

Responsible Organization: PLT. ENG. Phone: 31570
B65221

Priority: E

Is A Cross Reference To
AUTHORIZATION NO. WX52N

Index No.	CEI No./Tree	Document No.	Sheet No.	Rev.	Next Used On/Title
1000	—	H-6-1557	1	—	— / STRUCTURAL ELEVATIONS, DETAILS & SECTIONS

THIS EO SUPERSEDES EO 40216, 12-31-86 IN FULL AND DIFFERS AS FOLLOWS: 1) HAND RAILING CHANGED 2) HEIGHT OF CAGE EXTENDED 3) SAFETY RAILING ON WALL ADDED.

1) ADD "IMPACT LEVEL III" TO DWG.

2) ADD FOLLOWING NOTES TO DWG., APPLICABLE TO THE LADDER STEEL CAGE:
   1. ALL MATERIAL SHALL BE ASTM A 36 C.S. UNLESS OTHERWISE NOTED – IMPACT LEVEL III.
   2. WELD AND INSPECT STRUCTURAL PER AWS D1.1, VT FINAL PASS ALL WELDS.
   3. PREPARE AND PAINT ALL EXPOSED CARBON STEEL SURFACES WITH ONE COAT AMERCOAT #187 PRIMER, AND TWO FINISH COATS OF AMERCOAT # 33, FINAL COLOR GREY ON CAGE AND LADDER, FINAL COLOR YELLOW ON ALL HAND RAILINGS AND SAFETY RAILINGS PER MFRS INSTRUCTIONS — OR ENGRG. APPVD. EQUAL.
   4. REMOVE ALL BURRS AND BREAK SHARP EDGES.

REASONS & ESR No.
ESR-9630
ADDITION OF STEEL CAGE TO OUTDOOR LADDER
- SAFETY ITEM

Work Completed Date: JUN 05 1990 (2)
June 5, 1990

FOR DESIGN USE ONLY
DWG. TBC Yes [X] No [ ]
Design Manager Approval: G. T. Frater

DISTRIBUTION
J.H. HUBER MO-047
G.T. FRATER "
A.L. JONAS 2750E
J.L. WALKER 2751E
D.P. KERWICK 272AW
J. POORMAN 2750E
R. ROBERTS 272WA
G.E. McPherson 2753E

J.H. HUBER 1-8-87
Prepared By Date

G.T. Frater 1-20-87
Preparer's Immediate Manager Date

[X] L.L. Northrop 1-14-86
Checker Date

[X] J.H. Huber 1-8-87
Cognizant Design Engineer Date

[X] G.T. Frater 1-20-87
Cognizant Design Manager Date

[ ]
Quality Assurance Date

[X] P.E. Timm 1-16-87
Health, Safety & Environment Date

[ ]
Criticality Engineering & Analysis Date

[X] (N/A) K.F. Madge 1-16-87
Process Engineering Date

[X] G.T. Frater 1-20-87
PLANT ENGINEERING Date

[X] J.P. Haughton 1/9/87
WELDING ENGR Date

[X] (WHO) L.L. Erickson 1-16-87
OPERATIONS Date

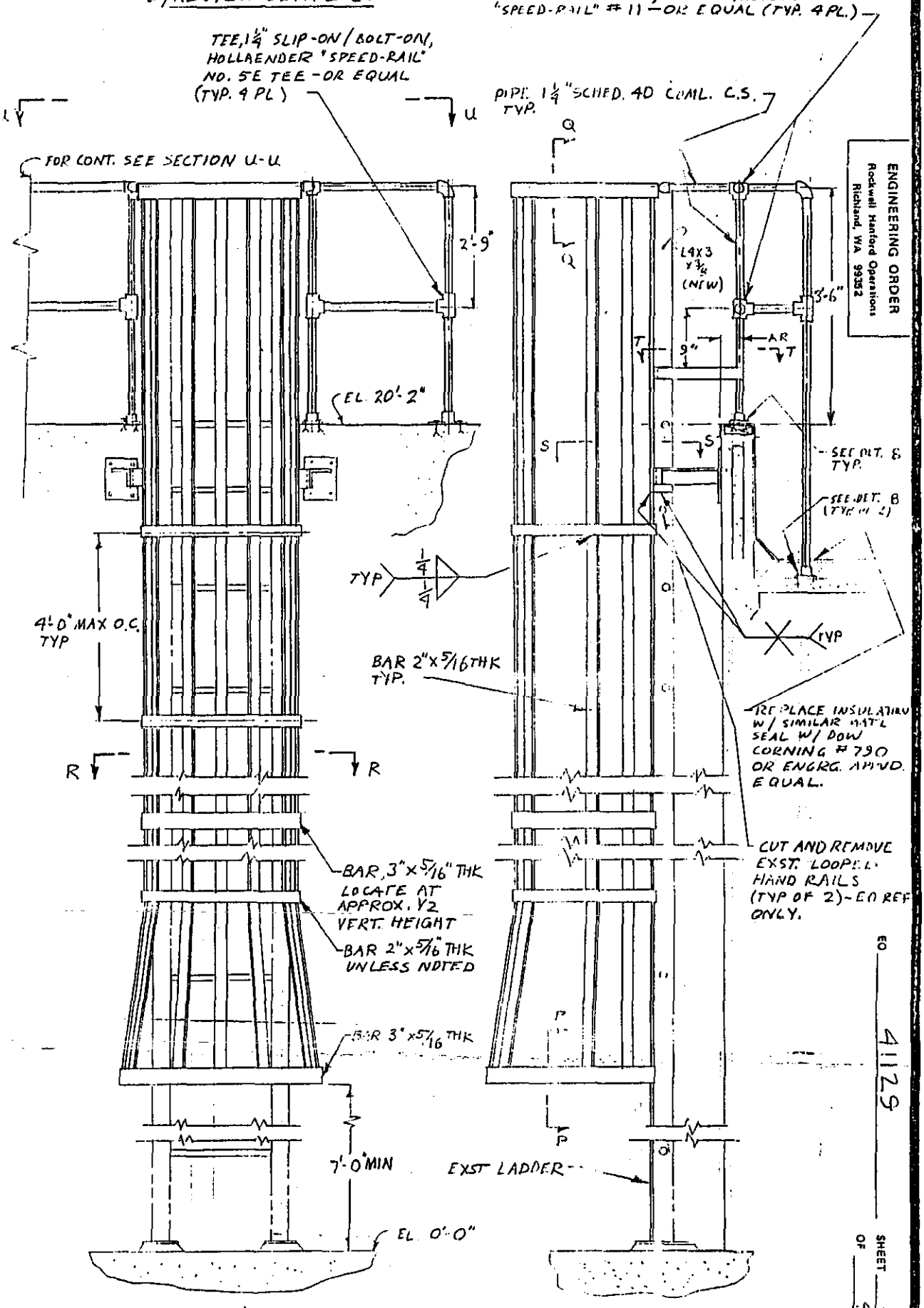
[X] Q.E. McPherson 1/14/87
Date

RELEASE STAMP
Sta #3 (11)
OFFICIALLY RELEASED
1987 JAN 20 PM 12:55

COE Richland, WA

BD-6400-093.1 (12-8)

3) REVISE DETAIL G:



STEEL LADDER (G)

SCALE: NONE

11-6-1953

ENGINEERING ORDER
Rockwell Hanford Operations
Richland, WA 99352

EO 41129

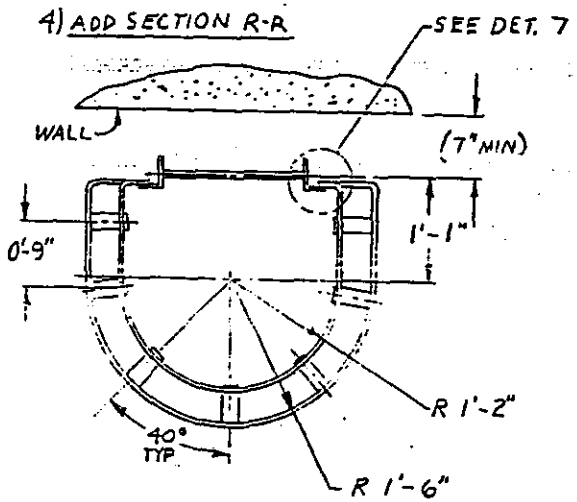
SHEET 2 OF 4

9411294.2939

ENGINEERING ORDER
Rockwell Hanford Operations
Richland, WA 99352

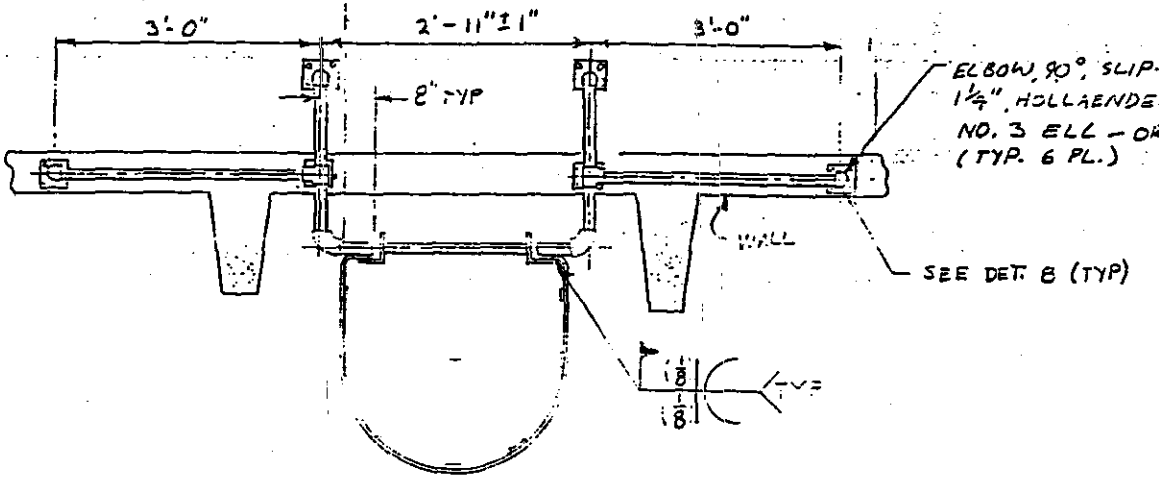
EO 41129 SHEET 3 OF 4

4) ADD SECTION R-R



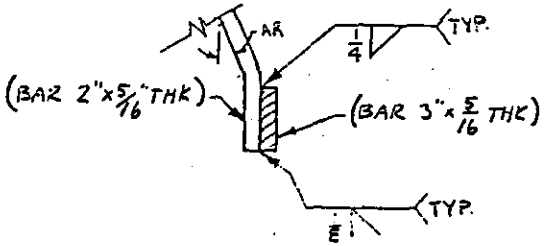
SECTION R-R
SCALE: NONE

5) ADD SECTION U-U



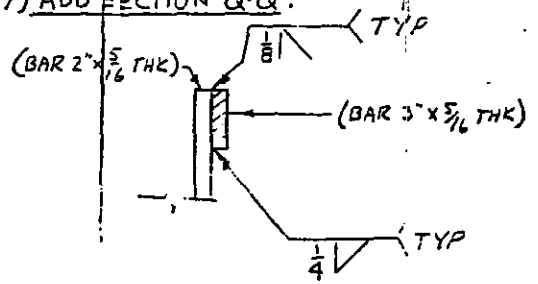
SECTION U-U
SCALE: NONE

6) ADD SECTION P-P:



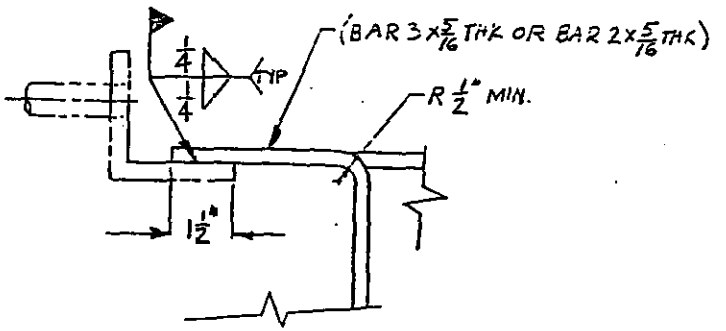
SECTION P-P
SCALE: NONE

7) ADD SECTION Q-Q:



SECTION Q-Q
SCALE: NONE

8) ADD DETAIL 7:



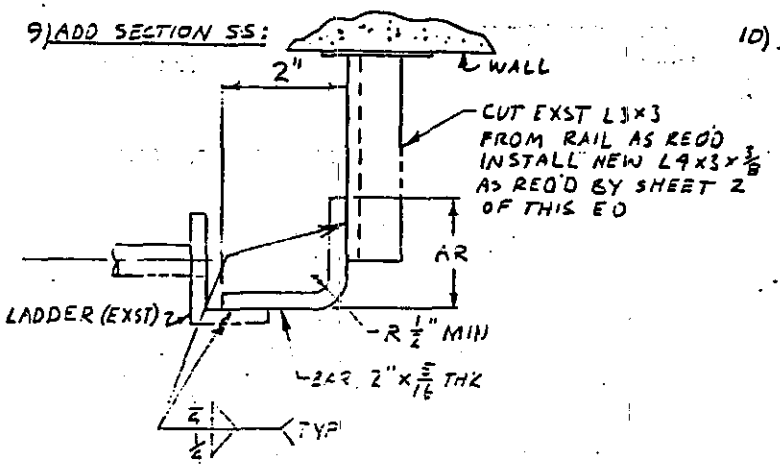
DETAIL 7 (TYP)
SCALE: NONE

9413294.2941

ENGINEERING ORDER
Rockwell Hanford Operations
Richland, WA 99352

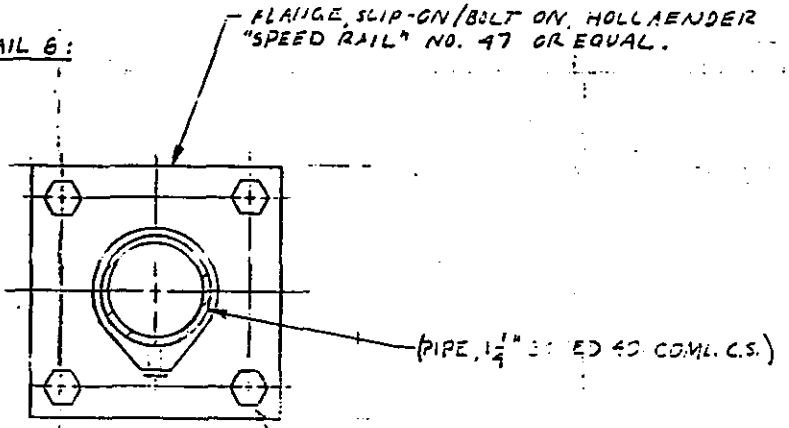
EO 41129 SHEET 4 OF 4

9) ADD SECTION S-S:



SECTION S-S (TYP.)
SCALE: NONE

10) ADD DETAIL 6:



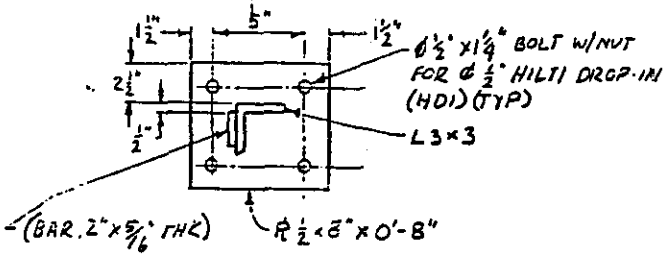
FOR BOLTING INTO [illegible] OF WALL: } 4 REQ'D - 4 PL.
SLEEVE ANCHOR, HX. 3/8 X [illegible]
HILTI #542096

FOR BOLTING INTO ROOF: } 4 REQ'D - 2 PL.
SLEEVE ANCHOR, HX. 3/8 × 1 7/8
HILTI #540218

} ENLARGEMENT OF EXISTING HOLES IN FLANGE REQ'D.

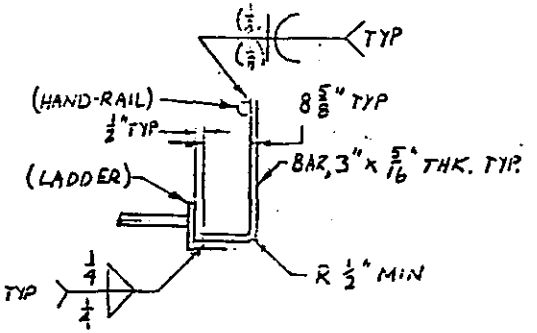
11) DELETE SECTION K.

12) REVISE SECTION L:
(TO SHOW POSITION OF BAR, 2"×5/16 THK)



SECTION (L)
SCALE: NONE

DETAIL 8 (TYP)
SCALE: NONE



SECTION T-T
SCALE: NONE

80-6400-093.3

3. PREPARE AND PAINT ALL EXPOSED CARBON STEEL SURFACES WITH ONE COAT AMERCOAT #187 PRIMER AND TWO FINISH COATS OF AMERCOAT #33 FINAL COLOR GREY ON CAGE AND LADDER, FINAL COLOR YELLOW ON ALL HAND RAILINGS AND SAFETY RAILINGS PER MFRS INSTRUCTIONS - OR ENGR APPRVD EQUAL.

4. REMOVE ALL BURRS AND BREAK SHARP EDGES.

5. CUT & REMOVE EXISTING LOOPED HAND-RAIL (2 PL) AND REPLACE WITH SAFETY SAFETY CAGE & HAND RAIL (HOLLAENDER) CUT AT APPROXIMATE AREA INDICATED BY LEADER LINE ARROWHEAD.

CONFIDENCE LEVEL B: CRITICAL DIMENSIONS ARE VERIFIED WITHIN SPECIFIED DRAWING TOLERANCES. CONCEALED PIPING AND/OR WIRING IS NOT VERIFIED, BUT THERE IS REASON TO BELIEVE THE DRAWING TO BE CORRECT.

ECN 174540

	DATE
A. COMPTON	1-20-92
D S Northrop	7-21-92
PM H L Humphreys	7-23-92
IGR B K Olson	7/22/92
D B Bunch	7/22/92
FOR IMPLEMENTATION	
DATE	

U.S. DEPARTMENT OF ENERGY
Richland Operations Office
Westinghouse Hanford Company

STRUCTURAL ELEVATIONS DETAILS & SECTIONS

SIZE	BLDG NO	INDEX NO	DWG NO	REV
F	616	1000	H-6-1557	1

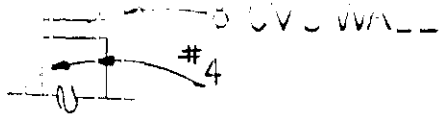
SCALE SHOWN

SHEET 2 OF 2

CHK PRINT ☐ DATE

COMMENT PRINT ☐ DATE

☆GPO: 1989-693-608



ND BEAM REINF

3/4" = 1'-0"

1

NOTE: FOR GENERAL NOTES SEE DWG H-6-1556

2 CONFIDENCE LEVEL B: CRITICAL DIMENSIONS ARE VERIFIED WITHIN SPECIFIED DRAWING TOLERANCES. CONCEALED PIPING AND/OR WIRING IS NOT VERIFIED, BUT THERE IS REASON TO BELIEVE THE DRAWING TO BE CORRECT.

		DATE
RHO APPROVAL BY		7/24/85
PROJ ENGR		7/24/85
QA		6/11/85
APPROVED BY		6/14/85
SAFETY		6/6/85
APPROVED BY		6/14
CHECKED BY	PAING	6/13/85
DRAWN BY	C.MCGOUGH	5/1/85
DESIGNED BY	M. HAQ	4/1/85

CLASSIFICATION	BY
NONE	NOT REQD

U. S. DEPARTMENT OF ENERGY
Richland Operations Office
KAISER ENGINEERS HANFORD COMPANY

STRUCTURAL PLAN, SECTIONS, EL & DETAILS

PROJECT TITLE: NON-RADIOACTIVE HAZARDOUS CHEMICAL WASTE FACILITY

PROJ	WO	JOB
B-526	X52602	R683A2
SCALE: SHOWN	BLDG: 616	INDEX: 1000

DRAWING NUMBER	SHEET	OF	REV
H-6-1558	1	1	2

B

A

2

1

NOTE:
REINFORCEMENT
IN FDN & FL. SLAB
NOT SHOWN

1'-0"

FDN SECTION AT DOOR SILL
(FOR OVERHEAD DOORS # ① & ⑥)

DETAIL 6
SCALE: 3/4" = 1'-0" H-6-1553

NOTE: FOR GENERAL NOTES SEE DWG H-6-1556

CONFIDENCE LEVEL B: CRITICAL DIMENSIONS ARE VERIFIED WITHIN SPECIFIED DRAWING TOLERANCES. CONCEALED PIPING AND/OR WIRING IS NOT VERIFIED, BUT THERE IS REASON TO BELIEVE THE DRAWING TO BE CORRECT.

REV			DATE
3	RHO APPROVAL BY		7/24/85
2	PROJ ENGR		7/24/85
	ON		10/21/85
	APPROVED BY		6/14/85
	SAFETY		6/21/85
1	APPROVED BY		6/14
	CHECKED BY	LAING	6/18/85
	DRAWN BY	C. MCGOUGH	4/4/85
	DESIGNED BY	M. HAQ	4/1/85
	CLASSIFICATION	BY	
	NONE	NOT REQD	

U. S. DEPARTMENT OF ENERGY
Richland Operations Office
KAISER ENGINEERS HANFORD COMPANY

STRUCTURAL ELEVATION, DETAILS & SECTIONS

PROJECT TITLE: NON-RADIOACTIVE HAZARDOUS CHEMICAL WASTE FACILITY

PROJ	WO	JOB
B-526	X52602	R688A2
SCALE: SHOWN	BLDG: 616	INDEX: 1000

DRAWING NUMBER	SHEET	OF	REV
H-6-1557	1	2	3

DIRECT EVAPORATIVE COOLING SHALL BE INITIATED. UPON A DROP IN SUPPLY AIR DISCHARGE TEMP ATURE THE CYCLE ALL BE REVERSED

NOTES: 1.) INSTALL PS IN ACCORD. NCE WITH TI MANUFACT ER'S WRITTEN INSTRUCTIONS.

2.) FIELD LOCATE THE HVAC SUPPLY AND EXHAUST FAN INDICATOR LIGHTS WITHIN THE OFFICE AREA. COORDINATE LOCATION W/ THE BLDG. MANAGER.

3.) THE HVAC SUPPLY AND EXHAUST FAN INDICATOR LIGHTS SHALL HAVE A NAMEPLATE, ENGRAVED W/ "SUPPLY FAN" AND "EXHAUST FAN". CHARACTERS SHALL BE 3/8-IN HIGH, NAMEPLATE SHALL BE 1/16 IN THK LAMINATED PLASTIC W/ BLACK SATIN FINISH AND WHITE CORE.

4.) CONDUCTORS SHALL BE #12 AWG, ALL WIRING SHALL BE INSTALLED IN EMT CONDUIT.

FOR CONTINUATION OF NOTES SEE SHEET 2

ESSENTIAL DRAWING

CONFIDENCE LEVEL A: CRITICAL DIMENSIONS ARE VERIFIED WITHIN SPECIFIED DRAWING TOLERANCES. CONCEALED PIPING OR WIRING IS VERIFIED AS TO FLOW PATH, BUT ACTUAL ROUTING IS NOT VERIFIED.

CO., CLASS 9001

DESCRIPTION	REV
EVISED PER ECN 173588 ND FV ECN 600774	4
VISION PER ECN 157838	3
ND ECN 129471 N 101367, ECN 122196 TO 42996, CEO 41153, VISION PER CEO-3588,	2

		DATE
RHO APPROVAL BY		7/24/85
PROJ ENGR	F.K. Hamada	7/24/85
QA		6/21/85
APPROVED BY		7/24/85
SAFETY		6/21/85
APPROVED BY		6/19
CHECKED BY	R. ROUTH	5/31/85
DRAWN BY	C. MCGOUGH	3/25/85
DESIGNER BY	F.K. HAMADA	3/20/85
CLASSIFICATION	BY	
NONE	NOT REQD	

U. S. DEPARTMENT OF ENERGY
Richland Operations Office
KAISER ENGINEERS HANFORD COMPANY

HVAC/PIPING PLANS, ELEVATION & SECTIONS

PROJECT TITLE: NON-RADIOACTIVE HAZARDOUS CHEMICAL WASTE FACILITY

PROJ	WO	JOB
B-526	X52602	R688A2
SCALE: SHOWN	BLDG: 616	INDEX: 7901, 8901

DRAWING NUMBER	SHEET	OF	REV
H-6-1559	1	3	4

2 1

3/4 2" DRAIN DOWN

CW DOWN

FILE COPY

ESSENTIAL
ENGINEERING CHANGE NOTICE

Page 1 of 7

1. ECN 605641

Proj. ECN

2. ECN Category (mark one)	3. Originator's Name, Organization, MSIN, and Telephone No.		4. Date
Supplemental [X] Direct Revision [] Change ECN [] Temporary [] Standby [] Supersedure [] Cancel/Void []	D.B. Bodily, 87250, T4-03, 373-2188		4/25/94
	5. Project Title/No./Work Order No. 616 Valve Labeling	6. Bldg./Sys./Fac. No. 616/Sanitary Water	7. Impact Level N/A
	8. Document Numbers Changed by this ECN (includes sheet no. and rev.) See block 12	9. Related ECN No(s). N/A	10. Related PO No. N/A

11a. Modification Work	11b. Work Package No.	11c. Modification Work Complete	11d. Restored to Original Condition (Temp. or Standby ECN only)
[X] Yes (fill out Blk. 11b) [] No (NA Blks. 11b, 11c, 11d)	2x-94-253	Cog. Engineer Signature & Date	N/A Cog. Engineer Signature & Date

12. Description of Change

1) Add valve numbering to temp control valves on section C of drawing H-6-1559, sheet 1, Rev. 4 as show in clouded area on page 3 of this ECN.

2) Add numbers for hose bibs and valves to the piping plan on H-6-1559 sheet 1, Rev. 4 as shown on page 4 of this ECN.

3) Add the following to the legend on H-6-1559 sheet 1, Rev. 4:

HB Hose Bib
SWV Sanitary Water Valve
CWV Cold Water Valve

4) Add Valve numbering to details 4, 6, 7 on drawing H-6-1559 sheet 3, Rev. 1 per clouded areas on pages 5, 6 and 7 of this ECN.

GW 4/29/94 2046

13a. Justification (mark one)						
Criteria Change []	Design Improvement [X]	Environmental []				
As-Found []	Facilitate Const. []	Const. Error/Omission []	Design Error/Omission []			

13b. Justification Details

Label valves for configuration control.

14. Distribution (include name, MSIN, and no. of copies)

D.B. Bodily T4-03, 1
S. Griffin T4-03, 1 (Record Copy)
S. Turner T4-06, 1
Sta #3 S2-05
Sta #4 R1-29
Sta #20 T4-00

RELEASE STAMP

OFFICIAL RELEASE (12)
BY WHC
DATE MAY 04 1994
Sta #20

A-7900-013-2 (06/92) GEF095

...ED AT 150% OF THE MOTOR HORSEPOWER.

...T FAN SHALL BE NON-SPARKING, HEAVY-DUTY, BACKWARDLY-
...ED, SWSI, (SINGLE WIDTH SINGLE INLET) CENTRIFUGAL TYPE
...ILLOW BLOCK REGREASEABLE BALL BEARINGS, MOUNTED ON A
... ISOLATED WELDED STRUCTURAL STEEL BASE. THE 2-SPEED MOTOR
BE MOUNTED ON THE STRUCTURAL STEEL BASE BY MEANS OF AN
ABLE CAST STEEL MOTOR RAIL-TYPE MOUNTING. THE DRIVE SHALL
USTABLE PITCH AND RATED AT 150% OF THE MOTOR HORSEPOWER.

...FORMATION PERTAINING TO SPECIFIC FANS REFER TO CVI #19157.

REV 2 | SHT 2 OF 3 | DWG NO H-6-1559

2

CONFIDENCE LEVEL A: CRITICAL DIMENSIONS ARE VERIFIED WITHIN SPECIFIED DRAWING TOLERANCES. CONCEALED PIPING OR WIRING IS VERIFIED AS TO FLOW PATH, BUT ACTUAL ROUTING IS NOT VERIFIED.

OFFICIAL RELEASE
BY WHC
DATE MAR 15 1991

~~EDT~~ ECN 129471

...VN	B. Dixon	DATE 2/6/91
...KED	J. H. White	3-13-91
...APVD		3-14-91
ENG		3-14-91
...R		
...R		
...R		
...FOR IMPLEMENTATION		
DATE		

U.S. DEPARTMENT OF ENERGY
Richland Operations Office
Westinghouse Hanford Company

HVAC/PIPING PLANS, ELEVATION & SECTIONS

SIZE	BLDG NO	INDEX NO	DWG	REV
F	616	7901, 8901,	H-6-1559	2

SCALE SHOWN | SHEET 2 OF 3

A

2 | CHK PRINT ☐ DATE | COMMENT PRINT ☐ DATE | 1

☆GFO: 1988-691-371

IPF #0 FILE COPY

ESSENTIAL

ENGINEERING CHANGE NOTICE

Page 1 of 4

1. ECN 173594
Proj. ECN

2. ECN Category (mark one)	3. Originator's Name, Organization, MSIN, and Telephone No.	4. Date
Supplemental [X] Direct Revision [ ] Change ECN [ ] Temporary [ ] Supersedure [ ] Discovery [ ] Cancel/Void [ ]	D. B. BODILY, 87250, T4-03, 3-2188	5/20/93
	5. Project Title/No./Work Order No.: INSTALL VENT TEST PORTS	6. Bldg./Sys./Fac. No.: 616
	7. Impact Level: ~~4~~ 3S 4/3/93	
	8. Document Number Affected (include rev. and sheet no.): SEE BLOCK 12	9. Related ECN No(s).: N/A
	10. Related PO No.	

11a. Modification Work	11b. Work Package Doc. No.	11c. Complete Installation Work	11d. Complete Restoration (Temp. ECN only)
[X] Yes (fill out Blk. 11b) [ ] No (NA Blks. 11b, 11c, 11d)	2X-93-0369	Cog. Engineer Signature & Date	N/A Cog. Engineer Signature & Date

12. Description of Change

1) ADD DETAILS 12-15 TO DRAWING H-6-1559, SHT. 2; REV. ~~2~~ 3 PER ATTACHED PAGE 3. DL BODILY PER TELECON MB 09/14/93

2) REVISE VENTILATION PLAN DRAWING H-6-1559, SHT. 1, REV. 3 PER CLOUDED AREAS ON ATTACHED PAGE 4.

13a. Justification (mark one)	13b. Justification Details
Criteria Change [ ] Design Improvement [X] Environmental [ ] As-Found [ ] Facilitate Const. [ ] Const. Error/Omission [ ] Design Error/Omission [ ]	THE TEST PORTS WILL MAKE IT EASIER FOR VENT AND BALANCE TO OBTAIN ACCURATE FLOW READINGS.

14. Distribution (include name, MSIN, and no. of copies)

D. B. BODILY	T4-03	1
S. TURNER	T4-06	1
N. WESTON	T4-03	1 (FILE COPY)
R.C. BRUNKE	H6-23	
CDWS #4	R1-29	

RELEASE STAMP

OFFICIAL RELEASE BY WHC
DATE SEP 14 1993
Sta. # 6

A-7900-013 (11/88)

9411294.2959

ENGINEERING CHANGE NOTICE

1. ECN (use no. from pg. 1) 173594

15. Design Verification Required	16. Cost Impact		17. Schedule Impact (days)
	ENGINEERING	CONSTRUCTION	
☒ Yes	Additional ☐ $ N/A	Additional ☐ $ N/A	Improvement ☐
☐ No	Savings ☐ $	Savings ☐ $	Delay ☐

18. Change Impact Review: Indicate the related documents (other than the engineering documents identified on Side 1) that will be affected by the change described in Block 12. Enter the affected document number in Block 19.

SDD/DD	☐	Seismic/Stress Analysis	☐	Tank Calibration Manual	☐
Functional Design Criteria	☐	Stress/Design Report	☐	Health Physics Procedure	☐
Operating Specification	☐	Interface Control Drawing	☐	Spares Multiple Unit Listing	☐
Criticality Specification	☐	Calibration Procedure	☐	Test Procedures/Specification	☐
Conceptual Design Report	☐	Installation Procedure	☐	Component Index	☐
Equipment Spec.	☐	Maintenance Procedure	☐	ASME Coded Item	☐
Const. Spec.	☐	Engineering Procedure	☐	Human Factor Consideration	☐
Procurement Spec.	☐	Operating Instruction	☐	Computer Software	☐
Vendor Information	☐	Operating Procedure	☐	Electric Circuit Schedule	☐
OM Manual	☐	Operational Safety Requirement	☐	ICRS Procedure	☐
FSAR/SAR	☐	IEFD Drawing	☐	Process Control Manual/Plan	☐
Safety Equipment List	☐	Cell Arrangement Drawing	☐	Process Flow Chart	☐
Radiation Work Permit	☐	Essential Material Specification	☐	Purchase Requisition	☐
Environmental Impact Statement	☐	Fac. Proc. Samp. Schedule	☐		☐
Environmental Report	☐	Inspection Plan	☐		☐
Environmental Permit	☐ N/A	Inventory Adjustment Request	☐ N/A		☐ N/A

19. Other Affected Documents: (NOTE: Documents listed below will not be revised by this ECN.) Signatures below indicate that the signing organization has been notified of other affected documents listed below.

Document Number/Revision	Document Number/Revision	Document Number/Revision
N/A	N/A	N/A

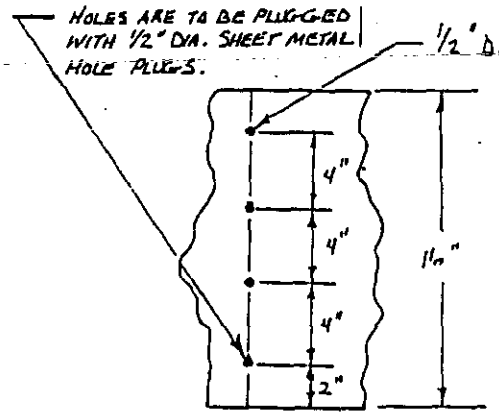
20. Approvals

OPERATIONS AND ENGINEERING	Signature	Date	ARCHITECT-ENGINEER	Signature	Date
Cog./Project Engineer	D. B. Bodily	6/3/93	PE		
Cog./Project Engr. Mgr.	D. Powell	6/8/93	QA		
QA			Safety		
Safety	R. F. Martin	9/13/93	Design		
Security			Other		
Proj.Prog./Dept. Mgr.					
Def. React. Div.					
Chem. Proc. Div.					
Def. Wst. Mgmt. Div.			DEPARTMENT OF ENERGY		
Adv. React. Dev. Div.					
Proj. Dept.					
Environ. Div.			ADDITIONAL		
IRM Dept.					
Facility Rep. (Ops)					
Other Ind. Rev.	[signature]	6/7/93			

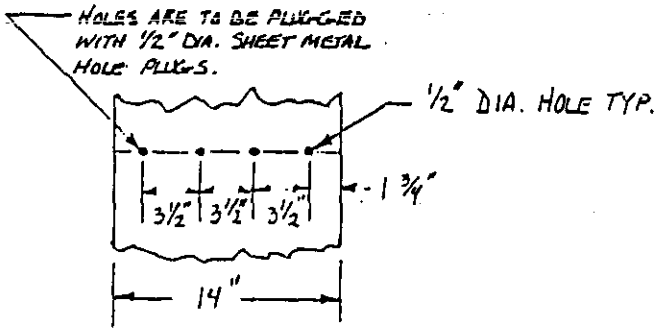
A-7900-013R (11/88)

9413294.2960

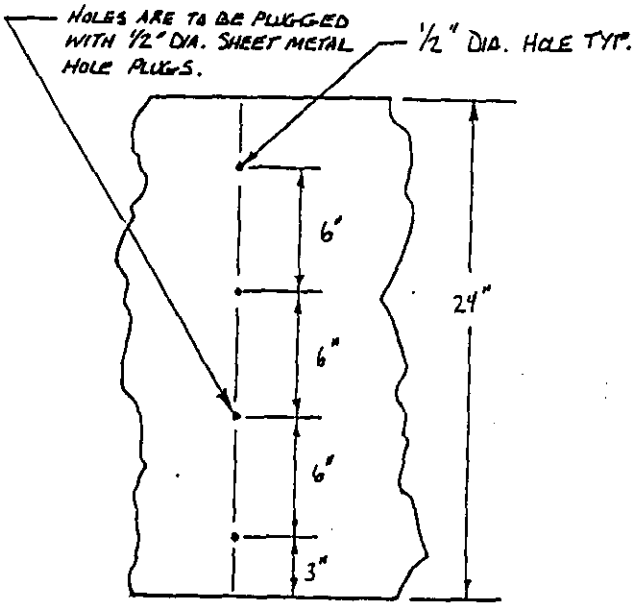
EDN 173594



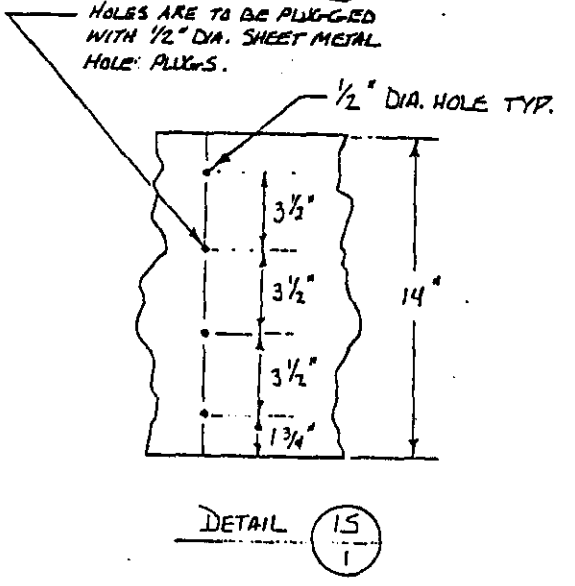
DETAIL 12/1



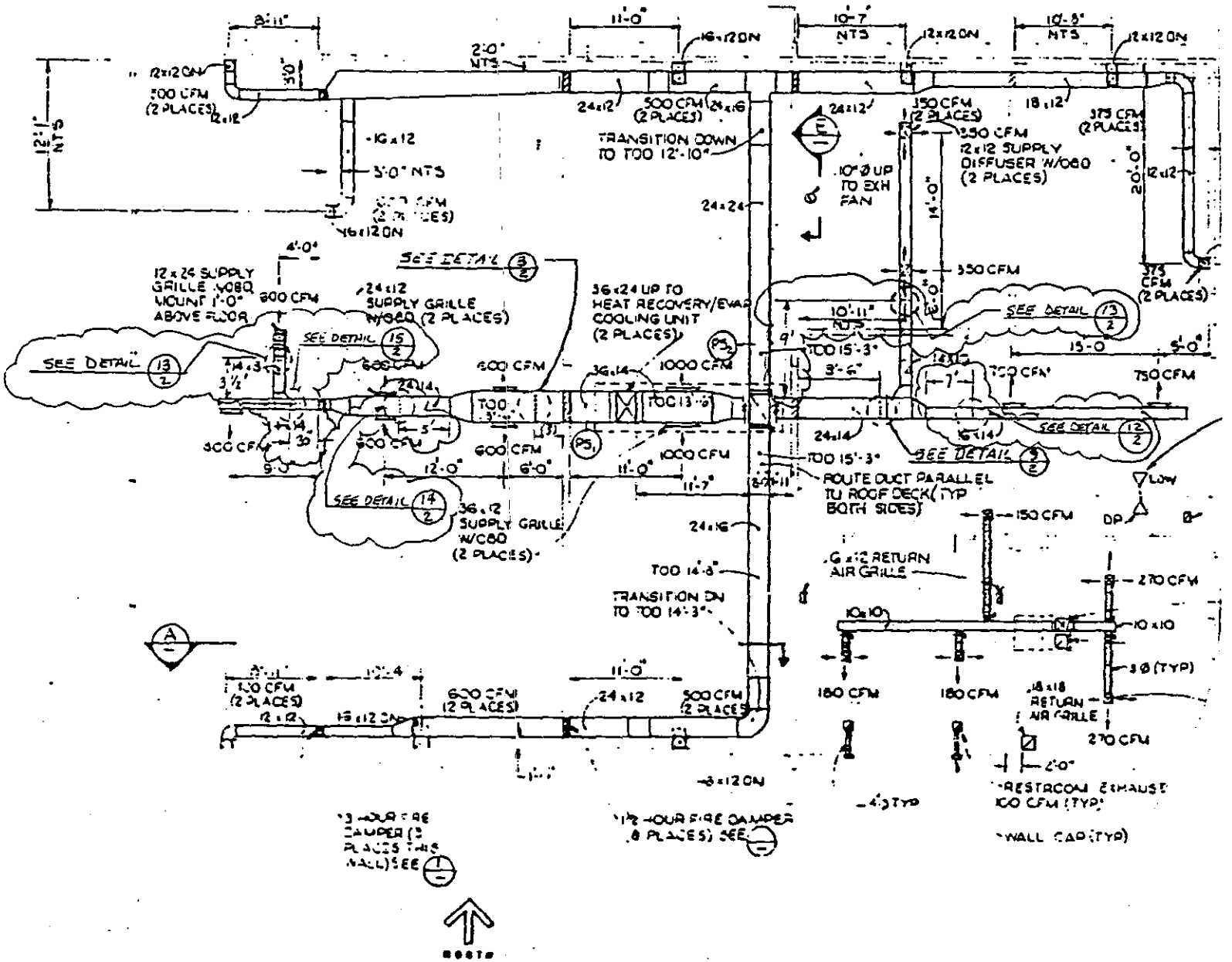
DETAIL 13/1



DETAIL 14/1



DETAIL 15/1



ENGINEERING CHANGE NOTICE CONTINUATION SHEET

Page 4 of 4

ECN 173594

SH

DWG NO H-6-1559

OFFICIAL RELEASE
BY WHC
DATE APR 15 1992

CONFIDENCE LEVEL A: CRITICAL DIMENSIONS ARE VERIFIED WITHIN SPECIFIED DRAWING TOLERANCES. CONCEALED PIPING OR WIRING IS VERIFIED AS TO FLOW PATH, BUT ACTUAL ROUTING IS NOT VERIFIED.

[redacted] ECN 157838

		DATE
DRAWN	A. COMPTON	3-25-92
CHECKED	D. Tilley	4-2-92
DFTG APVD	H Humphreys	4-14-92
COG ENGR	D Powell	4-8-92
QA		
OTHER		
OTHER		
OTHER		

APVD FOR IMPLEMENTATION
BY _____ DATE
FOR

N

U.S. DEPARTMENT OF ENERGY
Richland Operations Office
Westinghouse Hanford Company

PIPING ISOMETRICS

A

SIZE	BLDG NO	INDEX NO	DWG NO	REV
F	616	8003,8510	H-6-1559	2

SCALE NONE SHEET 3 OF 3

2 CHK PRINT ☐ DATE COMMENT PRINT ☐ DATE 1

☆ GPO: 1989-693-608

ESSENTIAL DRAWING

CONFIDENCE LEVEL A: CRITICAL DIMENSIONS ARE VERIFIED WITHIN SPECIFIED DRAWING TOLERANCES. CONCEALED PIPING OR WIRING IS VERIFIED AS TO FLOW PATH, BUT ACTUAL ROUTING IS NOT VERIFIED.

		DATE
RHO APPROVAL BY	J. J. Noble	7/24/85
PROJ ENGR	F.R. Hamada	7/24/85
QA	[illegible]	6/21/85
APPROVED BY	[illegible]	6/14/85
SAFETY	[illegible]	6/21/85
APPROVED BY	[illegible]	6/14
CHECKED BY	R.C. SAVARD / R ROUTH	5/31/85
DRAWN BY	C.R. MCGOUGH / A.L. EDWARDS	5/9/85
DESIGNED BY	F. HAMADA / R. HAZEL BAKER	5/1/85
CLASSIFICATION	BY	
NONE	NOT REQD	

U. S. DEPARTMENT OF ENERGY
Richland Operations Office
KAISER ENGINEERS HANFORD COMPANY

ELECTRICAL
EL, SECT, DIAG, SCHED & DET

PROJECT TITLE: NON-RADIOACTIVE HAZARDOUS CHEMICAL WASTE FACILITY

PROJ	WO	JOB
B-526	X52602	R688A2

SCALE	BLDG	INDEX
NONE	616	7304, 7404, 7702, &c.

DRAWING NUMBER	SHEET	OF	REV
H-6-1560	1	1	4

DESCRIPTION	REV
AIL DELETED IN REV 3 ISION PER ECN-161018	4
	4

B

A

2

1

MOUNT AT 4'-0".

CUIT 4 INDICATED). MOUNT AT
IDOR. MOUNT AT 4'-0" IN OTHER

MOUNT AT 7'-6".

MOUNT AT 4'-6".

CH, MOUNT AT 4'-6". LOWER
ONTROLLED EQUIPMENT.

, MOUNT AT 4'-6".

XTURE, LETTER DENOTES FIXTURE TYPE
ICATED).

IXTURE, LETTER DENOTES FIXTURE TYPE.

WP	DENOTES WEATHERPROOF.
CO	DENOTES CONDUIT ONLY.
EXP	DENOTES EXPLOSION PROOF.
(WH)	WATER HEATER.
	PAGING SPEAKER, MOUNT AT 8'-0" TO TOP.
[E]	EVACUATION ALARM PANEL. FLUSH MOUNT AT 5'-0".
	TELEPHONE OUTLET, FLUSH MOUNT AT 2'-0".
	SAFETY SWITCH, MOUNT AT 5'-0".

ESSENTIAL DRAWING

CONFIDENCE LEVEL A: CRITICAL DIMENSIONS ARE VERIFIED WITHIN SPECIFIED DRAWING TOLERANCES. CONCEALED PIPING OR WIRING IS VERIFIED AS TO FLOW PATH, BUT ACTUAL ROUTING IS NOT VERIFIED.

		DATE
RHO APPROVAL BY		7/24/85
PROJ ENGR		7/24/85
QA		6/21/85
APPROVED BY		6/14/85
SAFETY		6/21/85
APPROVED BY		6/14
CHECKED BY	R.C. SAVARD	6/14/85
DRAWN BY	A. L. EDWARDS	3/25/85
DESIGNED BY	R.R. HAZELBAKER	3/18/85
CLASSIFICATION	BY	
NONE	NOT REQD	

U. S. DEPARTMENT OF ENERGY
Richland Operations Office
KAISER ENGINEERS HANFORD COMPANY

ELECTRICAL PLANS, EL, DIAG & DET

PROJECT TITLE: NON-RADIOACTIVE HAZARDOUS CHEMICAL WASTE FACILITY

PROJ	WO	JOB
B-526	X52602	R688A2
SCALE: SHOWN	BLDG: 616	INDEX: 7101, 7201, 7301, 7401

DRAWING NUMBER: H-6-1561 | SHEET: 1 | OF: 1 | REV: 15

REV	DESCRIPTION
5	ISION PER ECN-161031

B

A

2

1

IFF#10

FILE COPY

ENGINEERING CHANGE NOTICE

ESSENTIAL

Page 1 of 5

1. ECN 600761

Proj. ECN

2. ECN Category (mark one)	3. Originator's Name, Organization, MSIN, and Telephone No.		4. Date
Supplemental [X] Direct Revision [] Change ECN [] Temporary [] Standby [] Supersedure [] Cancel/Void []	EDUARDO J. ORTEA/87250/T4-03/373-5770		9-9-93
	5. Project Title/No./Work Order No. 616 INSTALL SCISSOR/E16661	6. Bldg./Sys./Fac. No. 616	7. Impact Level 4
	8. Document Numbers Changed by this ECN (includes sheet no. and rev.) H-6-1561 sh.1 rev. 3 5 9/20/93	9. Related ECN No(s). N/A	10. Related PO No. N/A

11a. Modification Work	11b. Work Package No.	11c. Modification Work Complete	11d. Restored to Original Condition (Temp. or Standby ECN only)
[X] Yes (fill out Blk. 11b) [] No (NA Blks. 11b, 11c, 11d)	2X-93-231	12 MAY 23 1994 D. Bodily 5/17/94 Cog. Engineer Signature & Date	N/A Cog. Engineer Signature & Date

12. Description of Change

ADD CHANGES SHOWN ON PAGES 3, 4 AND 5 TO DRAWING.

13a. Justification (mark one)							
Criteria Change	[]	Design Improvement	[X]	Environmental	[]	As-Found	[]
Facilitate Const.	[]	Const. Error/Omission	[]	Design Error/Omission	[]		

13b. Justification Details

PROVIDE ELECTRICAL POWER FOR THE SCISSOR LIFT ELECTRICAL MOTOR.

14. Distribution (include name, MSIN, and no. of copies)

SHERI GRIFFIN MSIN T4-03
GENE S. (SCOTT) TURNER MSIN T4-06
ED J. ORTEA MSIN T4-03
DOUG B. BODILY

STA# 4 A1-29

RELEASE STAMP

OFFICIAL RELEASE BY WHC 63

DATE SEP 20 1993

Sta #6

A-7900-013-1 (06/92)

ENGINEERING CHANGE NOTICE

1. ECN (use no. from pg. 1) 600761

15. Design Verification Required	16. Cost Impact				17. Schedule Impact (days)	
	ENGINEERING		CONSTRUCTION			
[X] Yes	Additional	[ ] $N/A	Additional	[ ] $	Improvement	[ ]
[ ] No	Savings	[ ] $	Savings	[ ] $	Delay	[ ] N/A

18. Change Impact Review: Indicate the related documents (other than the engineering documents identified on Side 1) that will be affected by the change described in Block 12. Enter the affected document number in Block 19.

SDD/DD	[ ]	Seismic/Stress Analysis	[ ]	Tank Calibration Manual	[ ]
Functional Design Criteria	[ ]	Stress/Design Report	[ ]	Health Physics Procedure	[ ]
Operating Specification	[ ]	Interface Control Drawing	[ ]	Spares Multiple Unit Listing	[ ]
Criticality Specification	[ ]	Calibration Procedure	[ ]	Test Procedures/Specification	[ ]
Conceptual Design Report	[ ]	Installation Procedure	[ ]	Component Index	[ ]
Equipment Spec.	[ ]	Maintenance Procedure	[ ]	ASME Coded Item	[ ]
Const. Spec.	[ ]	Engineering Procedure	[ ]	Human Factor Consideration	[ ]
Procurement Spec.	[ ]	Operating Instruction	[ ] N/A	Computer Software	[ ]
Vendor Information	[ ]	Operating Procedure	[X]	Electric Circuit Schedule	[ ]
OM Manual	[ ]	Operational Safety Requirement	[ ]	ICRS Procedure	[ ]
FSAR/SAR	[ ]	IEFD Drawing	[ ]	Process Control Manual/Plan	[ ]
Safety Equipment List	[ ]	Cell Arrangement Drawing	[ ]	Process Flow Chart	[ ]
Radiation Work Permit	[ ]	Essential Material Specification	[ ]	Purchase Requisition	[ ]
Environmental Impact Statement	[ ]	Fac. Proc. Samp. Schedule	[ ]		[ ]
Environmental Report	[ ]	Inspection Plan	[ ]		[ ]
Environmental Permit	[ ] N/A	Inventory Adjustment Request	[ ] N/A		[ ] NA

19. Other Affected Documents: (NOTE: Documents listed below will not be revised by this ECN.) Signatures below indicate that the signing organization has been notified of other affected documents listed below.

Document Number/Revision	Document Number/Revision	Document Number Revision

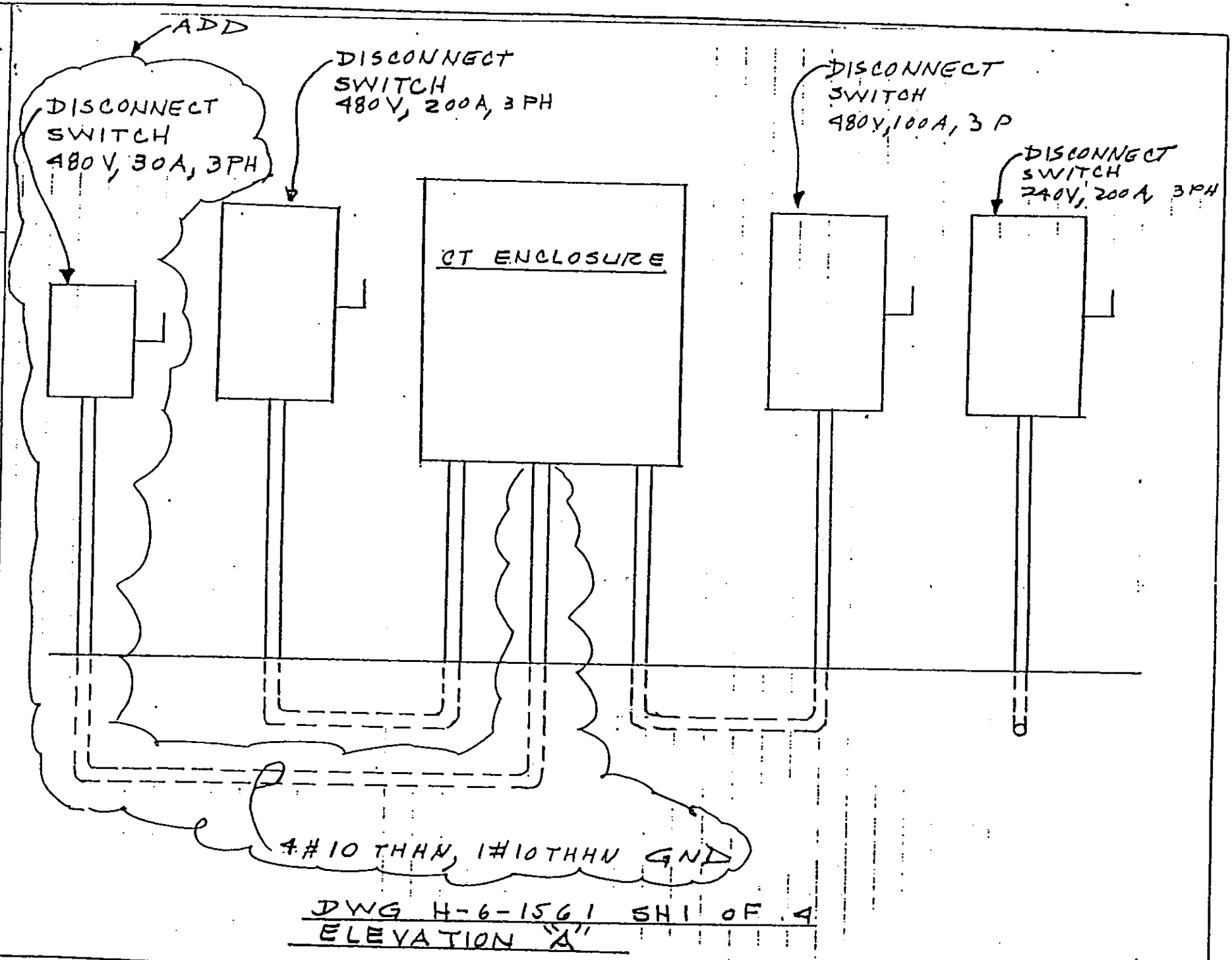
20. Approvals

Signature	Date	Signature	Date
OPERATIONS AND ENGINEERING		ARCHITECT-ENGINEER	
Cog Engineer E. J. Dalton	9/13/93	PE	
Cog. Mgr. D. B. Powell	9/13/93	QA	
QA		Safety	
Safety		Design	
Security		Environ.	
Environ.		Other	
Projects/Programs			
Tank Waste Remediation System			
Facilities Operations		DEPARTMENT OF ENERGY	
Restoration & Remediation		Signature or Letter No.	
Operations & Support Services			
IRM		ADDITIONAL	
Other INDEP. VER. D. Bodily	9/13/93		

ENGINEERING CHANGE NOTICE CONTINUATION SHEET

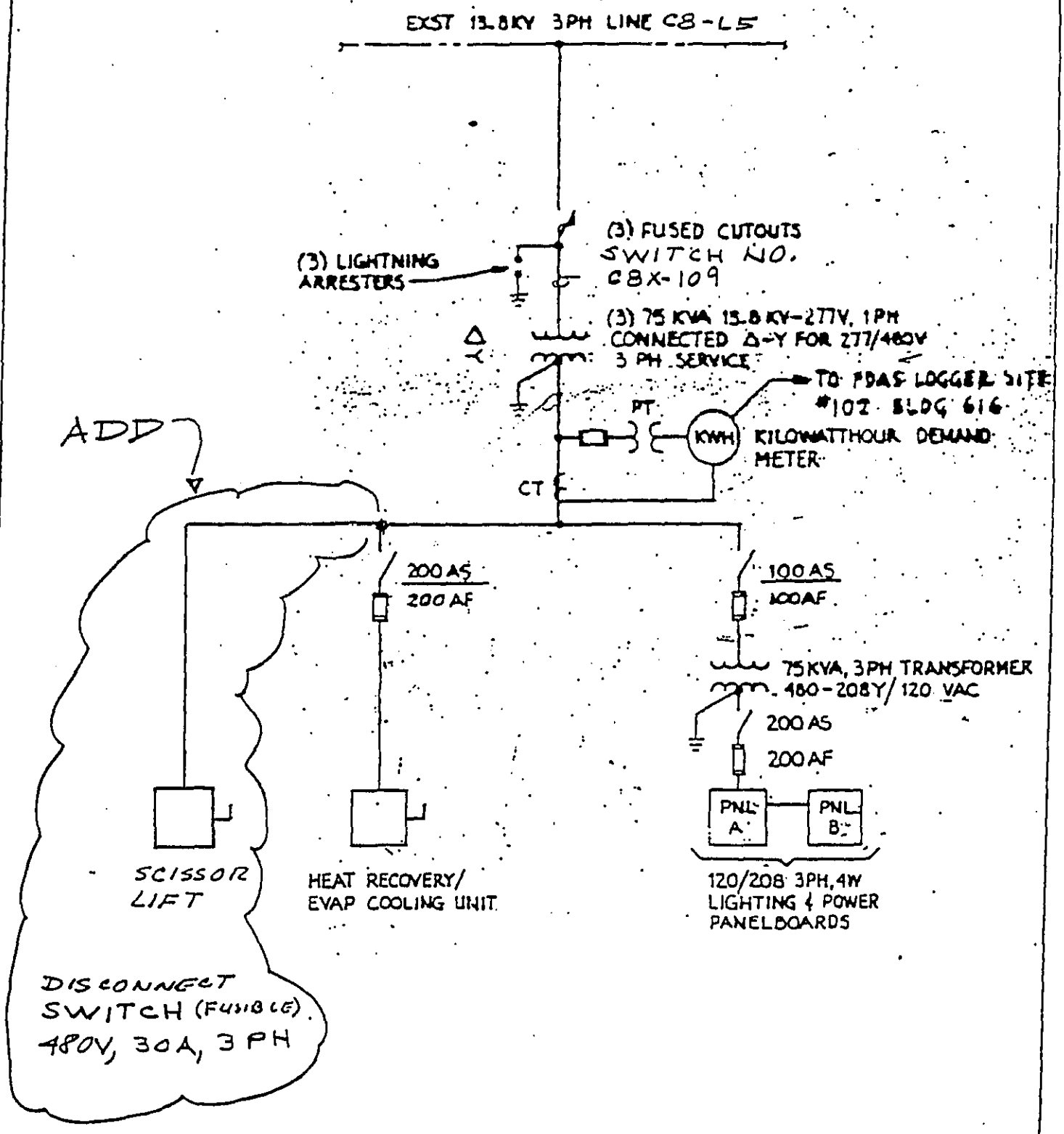
ECN 600761

Page 3 of 5



DWG H-6-1561 SH 1 OF 4

ELEVATION "A"



IPP#10

FREE COPY

ENGINEERING CHANGE NOTICE

ESSENTIAL

1. ECN 602660

Proj. ECN

2. ECN Category (mark one)	3. Originator's Name, Organization, MSIN, and Telephone No.	4. Date
Supplemental [ ] Direct Revision [ ] Change ECN [ ] Temporary [ ] Standby [ ] Supersedure [X] Cancel/Void [ ]	EDUARDO J. ORTEA/87250/T4-03/373-5770	11/10/93

5. Project Title/No./Work Order No.	6. Bldg./Sys./Fac. No.	7. Impact Level
616 ELECTRICAL EQUIPMENT UPGRADE/FLAMMABLE CELLS/A130A1	616	3S

8. Document Numbers Changed by this ECN (includes sheet no. and rev.)	9. Related ECN No(s).	10. Related PO No.
H-2-1561 SH.1 REV. 5	ECN- 157588	N/A

11a. Modification Work	11b. Work Package No.	11c. Modification Work Complete	11d. Restored to Original Condition (Temp. or Standby ECN only)
[X] Yes (fill out Blk. 11b) [ ] No (NA Blks. 11b, 11c, 11d)	2X-93-00191	FEB 07 1994 63 D.B. Bodily 2/4/94 Cog. Engineer Signature & Date Sta #6	N/A Cog. Engineer Signature & Date

12. Description of Change

ADD CHANGES SHOWN ON PAGE 3 TO DRAWING.

EJO 11/16/93

13a. Justification (mark one)							
Criteria Change	[X]	Design Improvement	[ ]	Environmental	[ ]		
As-Found	[ ]	Facilitate Const.	[ ]	Const. Error/Omission	[ ]	Design Error/Omission	[ ]

13b. Justification Details

PACKAGING, SHIPPING AND WASTE SAFETY ASSURANCE DEPARTMENT (PSWSA) PERFORMED AN OPERATIONAL SAFETY ASSESSMENT AUDIT AND ISSUED REPORT NO. OSA-616-91-002 ON 616 FACILITY AND DATED AUGUST 8, 1991. AS A RESULT ONE FINDING WAS ISSUED IN REGARD OF THE FLAMMABLE LIQUID CELLS AREA CLASSIFICATION. ECN NO. 157588 WAS ISSUED ON JANUARY 13, 1992 TO ADDRESS THIS FINDING. FIRE PROTECTION DEPARTMENT CONDUCTED AN ENGINEERING INVESTIGATION OF THE FLAMMABLE LIQUID CELLS AREA CLASSIFICATION AND SOLID WASTE MANAGEMENT FACILITY ENGINEERING ISSUED INTERNAL MEMO NO. 87250-SWMFE-93-072 ON NOVEMBER 4, 1993 IN WHICH THE FLAMMABLE CELLS WERE "RE-CLASSIFIED "ACCORDING WITH THE MISSION OF THE 616 FACILITY.

THIS ECN SUPERSEDES ECN NO. 157588. ENGINEERING DATA TRANSMITTAL (EDT) NO. 600078 CREATES AN AREA CLASSIFICATION DRAWING OF THE FLAMMABLE CELLS TO ADDRESS BOTH THE OPERATIONAL SAFETY ASSESSMENT OSA-616-91-002 FINDING AND THE REQUIREMENTS OF THE FIRE PROTECTION RE-CLASSIFICATION MEMO MENTIONED ABOVE.

14. Distribution (include name, MSIN, and no. of copies)

SHERI GRIFFIN MSIN T4-03
GENE S. (SCOTT) TURNER MSIN T4-06
ED J. ORTEA MSIN T4-03
D.B. BODILY T4-03
COWS #4 R1-29
COWS #3 S2-05
~~COWS~~

IPP#10 T6-02

RELEASE STAMP

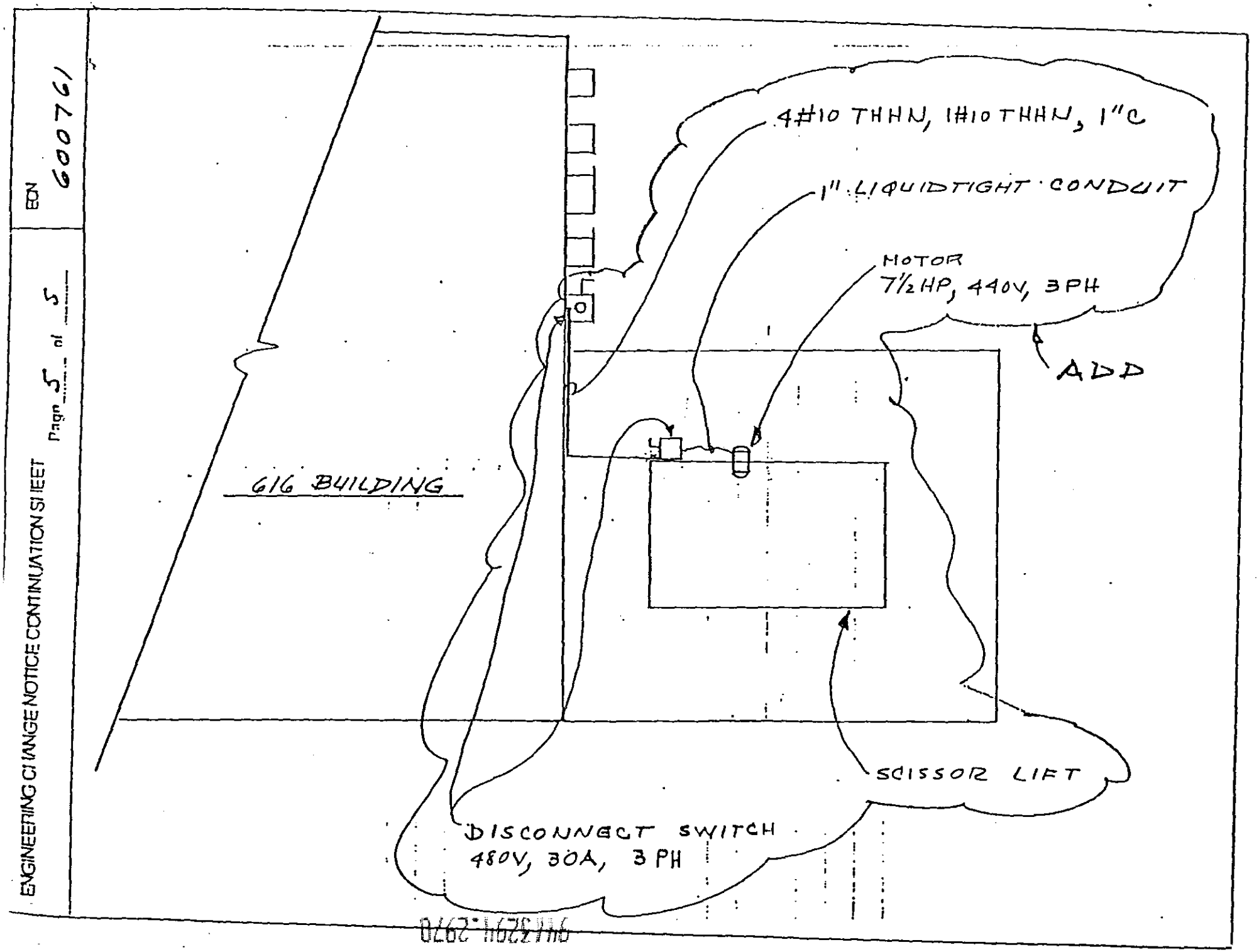
OFFICIAL RELEASE BY WHC 63

DATE JAN 20 1994.

Sta #6

A-7900-013-1 (08/92)

9413294.2971


EDN 600761
Page 5 of 5
ENGINEERING CHANGE NOTICE CONTINUATION SHEET
4#10 THHN, 1#10 THHN, 1"C
1" LIQUIDTIGHT CONDUIT
MOTOR
7½HP, 440V, 3PH
ADD
616 BUILDING
SCISSOR LIFT
DISCONNECT SWITCH
480V, 30A, 3PH

15. Design Verification Required	16. Cost Impact				17. Schedule Impact (days)	
	ENGINEERING		CONSTRUCTION			
[X] Yes	Additional	[] $N/A	Additional	[] $	Improvement	[]
[] No	Savings	[] $	Savings	[] $	Delay	[] N/A

18. Change Impact Review: Indicate the related documents (other than the engineering documents identified on Side 1) that will be affected by the change described in Block 12. Enter the affected document number in Block 19.

SDD/DD	[]	Seismic/Stress Analysis	[]	Tank Calibration Manual	[]
Functional Design Criteria	[]	Stress/Design Report	[]	Health Physics Procedure	[]
Operating Specification	[]	Interface Control Drawing	[]	Spares Multiple Unit Listing	[]
Criticality Specification	[]	Calibration Procedure	[]	Test Procedures/Specification	[]
Conceptual Design Report	[]	Installation Procedure	[]	Component Index	[]
Equipment Spec.	[]	Maintenance Procedure	[]	ASME Coded Item	[]
Const. Spec.	[]	Engineering Procedure	[]	Human Factor Consideration	[]
Procurement Spec.	[]	Operating Instruction	[]	Computer Software	[]
Vendor Information	[]	Operating Procedure	[]	Electric Circuit Schedule	[]
OM Manual	[]	Operational Safety Requirement	[]	ICRS Procedure	[]
FSAR/SAR	[]	IEFD Drawing	[]	Process Control Manual/Plan	[]
Safety Equipment List	[]	Cell Arrangement Drawing	[]	Process Flow Chart	[]
Radiation Work Permit	[]	Essential Material Specification	[]	Purchase Requisition	[]
Environmental Impact Statement	[]	Fac. Proc. Samp. Schedule	[]		[]
Environmental Report	[]	Inspection Plan	[]		[]
Environmental Permit	[] N/A	Inventory Adjustment Request	[] N/A		[] NA

19. Other Affected Documents: (NOTE: Documents listed below will not be revised by this ECN.) Signatures below indicate that the signing organization has been notified of other affected documents listed below.

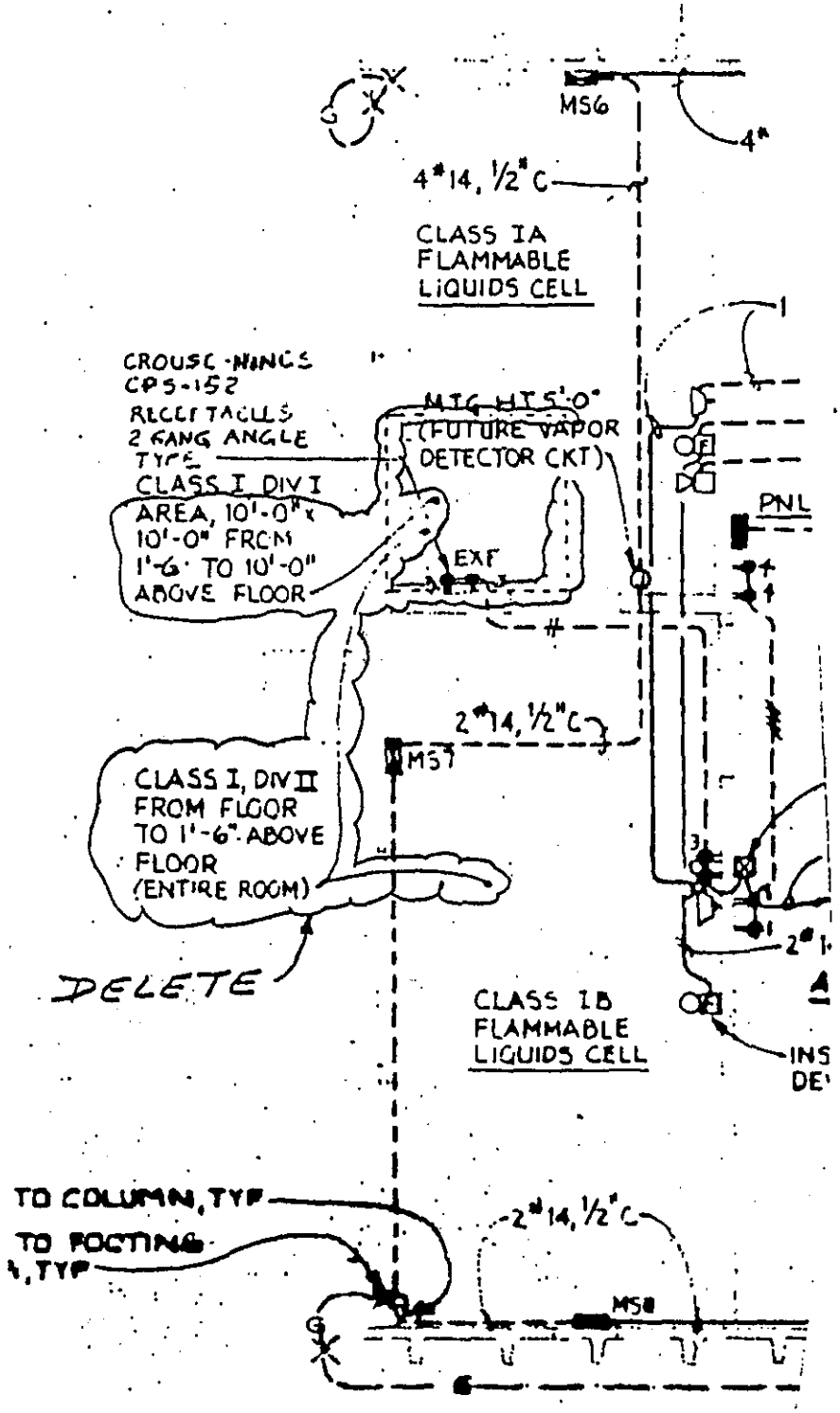
Document Number/Revision	Document Number/Revision	Document Number Revision
NA		

20. Approvals

Signature	Date	Signature	Date
OPERATIONS AND ENGINEERING		ARCHITECT-ENGINEER	
Cog Engineer Eduardo J. Dutra	11/15/93	PE	
Cog. Mgr. D B Hunsell	11/22/93	QA	
QA		Safety	
Safety [illegible]	1-18-94	Design	
Security		Environ.	
Environ.		Other	
Projects/Programs			
Tank Waste Remediation System			
Facilities Operations		DEPARTMENT OF ENERGY	
Restoration & Remediation		Signature or Letter No.	
Operations & Support Services			
IRM INDEP. REVIEW D.B. Bodily	11/16/93	ADDITIONAL	
Other			

9413294.2972

ECN 602660


MS6
4"
4"14, 1/2"C
CLASS IA
FLAMMABLE
LIQUIDS CELL
CROUSE-HINGS
CPS-152
RECEPTACLE
2 GANG ANGLE
TYPE
CLASS I DIV I
AREA, 10'-0" x
10'-0" FROM
1'-6" TO 10'-0"
ABOVE FLOOR
MTG HT 5'-0"
(FUTURE VAPOR
DETECTOR CKT)
EXP
PNL
2"14, 1/2"C
MS7
CLASS I, DIV II
FROM FLOOR
TO 1'-6" ABOVE
FLOOR
(ENTIRE ROOM)
DELETE
CLASS IB
FLAMMABLE
LIQUIDS CELL
TO COLUMN, TYP
TO FOOTING
, TYP
2"14, 1/2"C
MS8

15. Design Verification Required	16. Cost Impact				17. Schedule Impact (days)	
	ENGINEERING		CONSTRUCTION			
[X] Yes	Additional	[] $	Additional	[] $	Improvement	[]
[] No	Savings	[] $	Savings	[] $	Delay	[]

18. Change Impact Review: Indicate the related documents (other than the engineering documents identified on Side 1) that will be affected by the change described in Block 12. Enter the affected document number in Block 19.

SDD/DD	[]	Seismic/Stress Analysis	[]	Tank Calibration Manual	[]
Functional Design Criteria	[]	Stress/Design Report	[]	Health Physics Procedure	[]
Operating Specification	[]	Interface Control Drawing	[]	Spares Multiple Unit Listing	[]
Criticality Specification	[]	Calibration Procedure	[]	Test Procedures/Specification	[]
Conceptual Design Report	[]	Installation Procedure	[]	Component Index	[]
Equipment Spec.	[]	Maintenance Procedure	[]	ASME Coded Item	[]
Const. Spec.	[]	Engineering Procedure	[]	Human Factor Consideration	[]
Procurement Spec.	[]	Operating Instruction	[]	Computer Software	[]
Vendor Information	[]	Operating Procedure	[]	Electric Circuit Schedule	[]
OM Manual	[]	Operational Safety Requirement	[]	ICRS Procedure	[]
FSAR/SAR	[]	IEFD Drawing	[]	Process Control Manual/Plan	[]
Safety Equipment List	[]	Cell Arrangement Drawing	[]	Process Flow Chart	[]
Radiation Work Permit	[]	Essential Material Specification	[]	Purchase Requisition	[]
Environmental Impact Statement	[]	Fac. Proc. Samp. Schedule	[]		[]
Environmental Report	[] N/A	Inspection Plan	[] N/A		[] N/A
Environmental Permit	[]	Inventory Adjustment Request	[]		[]

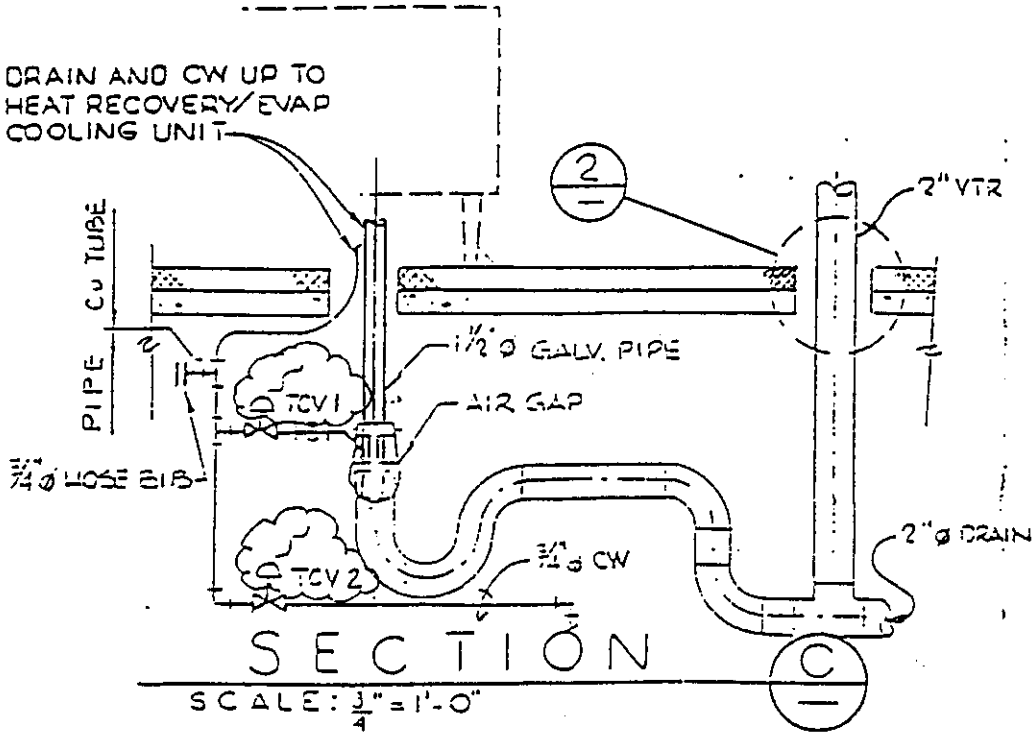
19. Other Affected Documents: (NOTE: Documents listed below will not be revised by this ECN.) Signatures below indicate that the signing organization has been notified of other affected documents listed below.

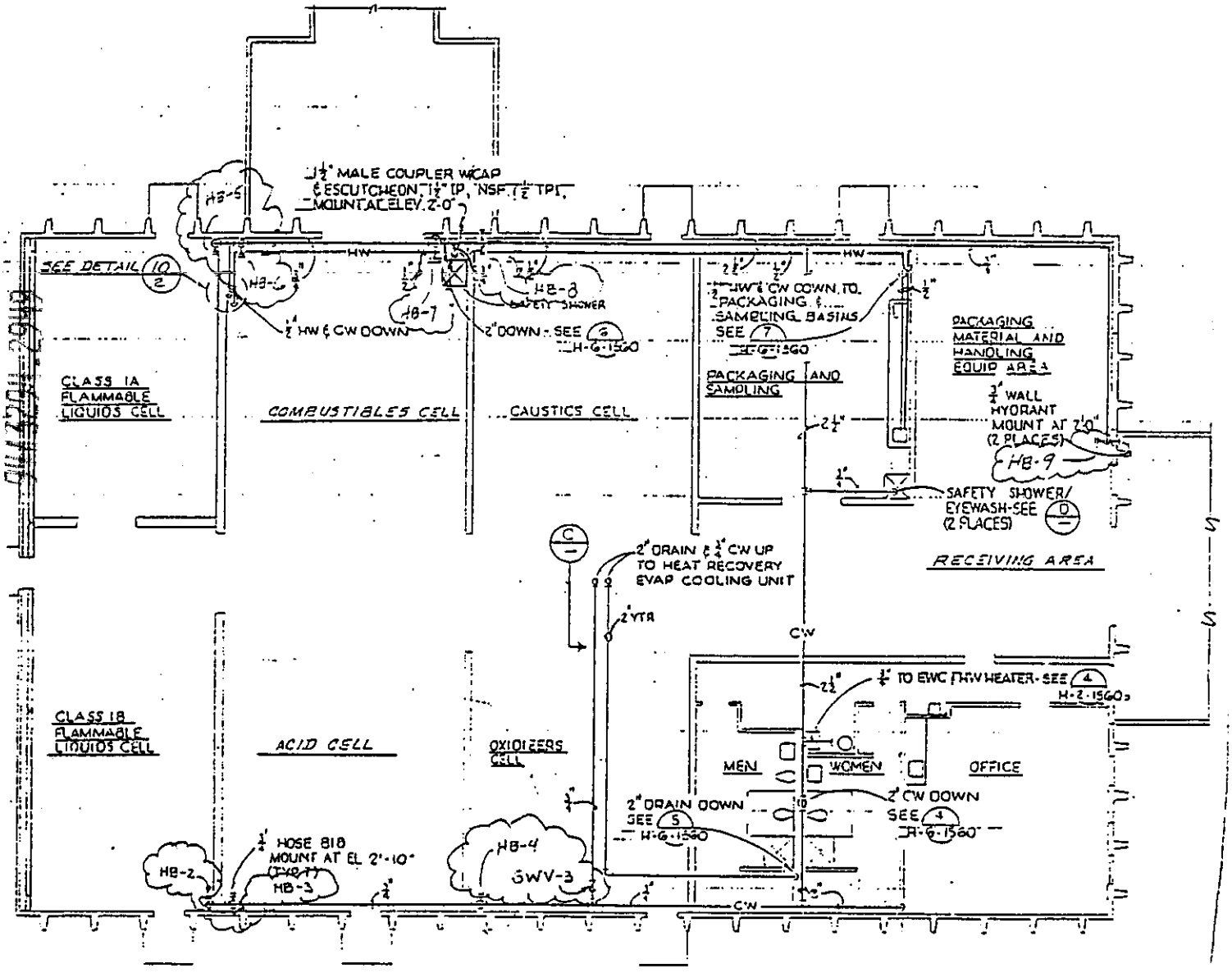
Document Number/Revision	Document Number/Revision	Document Number Revision
N/A		

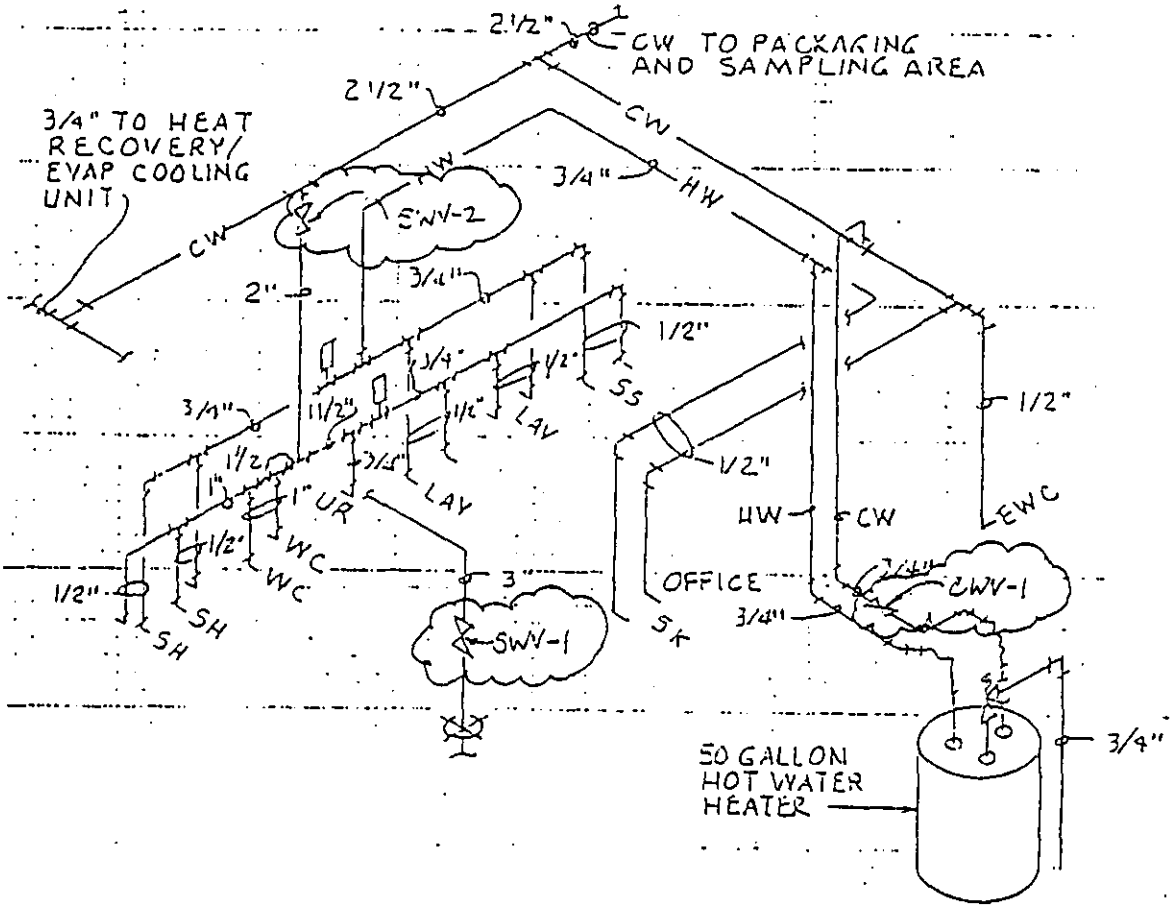
20. Approvals

Signature		Date	Signature		Date
OPERATIONS AND ENGINEERING			ARCHITECT-ENGINEER		
Cog Engineer	D. B. Bodily	5/2/94	PE		
Cog. Mgr.	R. M. Megalhaes for DB Powell	5/4/94	QA		
QA			Safety		
Safety			Design		
Security			Environ.		
Environ.			Other		
Projects/Programs					
Tank Waste Remediation System					
Facilities Operations			DEPARTMENT OF ENERGY		
Restoration & Remediation			Signature or Letter No.		
Operations & Support Services					
IRM			ADDITIONAL		
Other DND Review: [signature]		5/3/94			

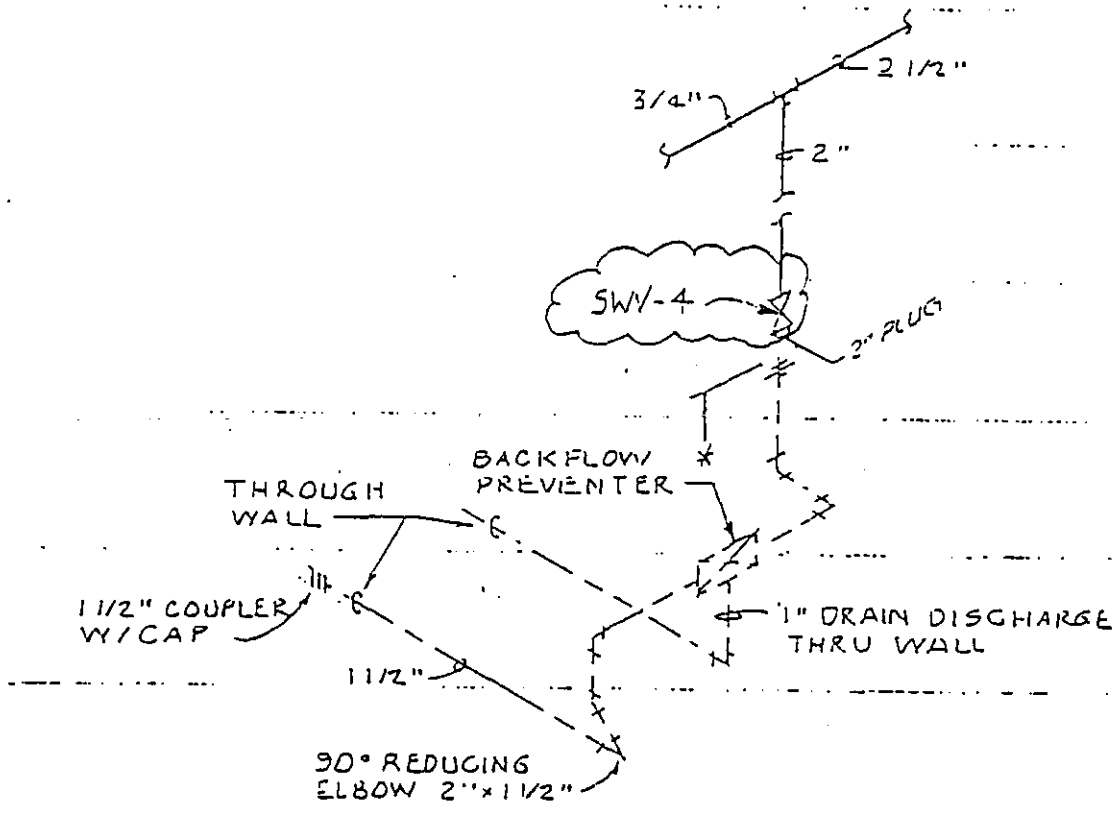
9413294.2947




1½" MALE COUPLER W/CAP & ESCUTCHEON 1½" IP, NSF, (½ TPI) MOUNT AT ELEV. 2'-0"
HB-5
HB-6
HB-7
HB-8
SAFETY SHOWER
SEE DETAIL 10/2
½" HW & CW DOWN
2" DOWN - SEE 6/H-6-1560
HW
CW
2½" HW & CW DOWN TO PACKAGING & SAMPLING BASINS SEE 7/H-6-1560
PACKAGING AND SAMPLING
PACKAGING MATERIAL AND HANDLING EQUIP AREA
¾" WALL HYDRANT MOUNT AT 7'-0" (2 PLACES)
HB-9
SAFETY SHOWER/ EYEWASH-SEE D/— (2 PLACES)
RECEIVING AREA
CLASS IA FLAMMABLE LIQUIDS CELL
COMBUSTIBLES CELL
CAUSTICS CELL
C/—
2" DRAIN & ¾" CW UP TO HEAT RECOVERY EVAP COOLING UNIT
2" VTR
CLASS 1B FLAMMABLE LIQUIDS CELL
ACID CELL
OXIDIZERS CELL
¾" TO EWC HW HEATER - SEE 4/H-2-1560
MEN
WOMEN
OFFICE
2" DRAIN DOWN SEE 5/H-6-1560
2" CW DOWN SEE 4/H-6-1560
¾" HOSE BIB MOUNT AT EL 2'-10" (TYP 2)
HB-2
HB-3
HB-4
SWV-3

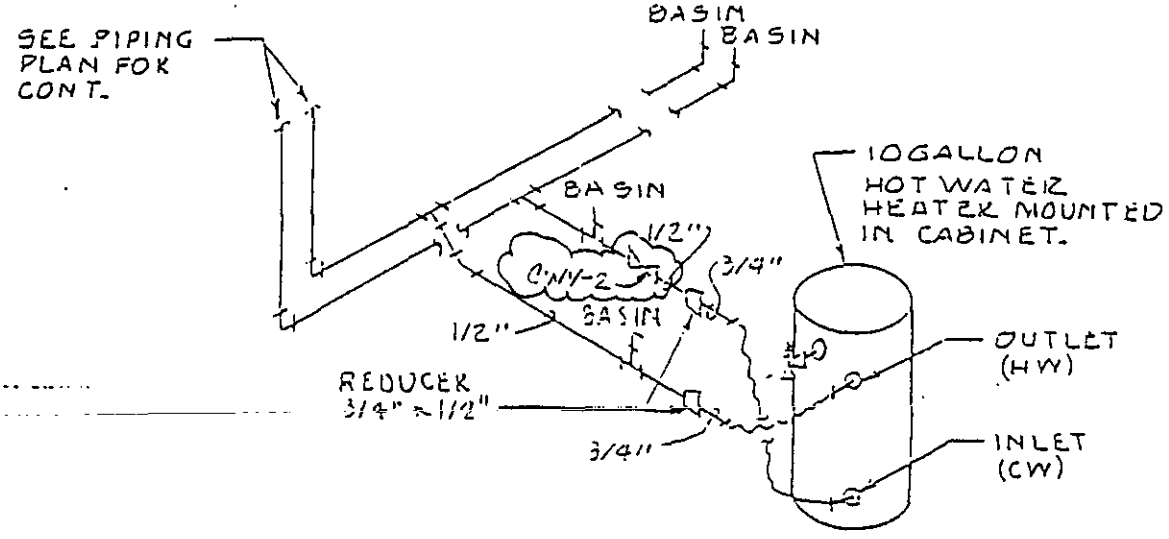


PARTIAL SANITARY WATER ISOMETRIC (4)
H-6-1559



BACKFLOW PREVENTER ISOMETRIC (6)

* NOTE: PIPE ROUTING IN PHANTOM HAS BEEN REMOVED (LEAVE FOR HISTORICAL RECORD ONLY). H-6-1559



PACKAGING & SAMPLING SW ISOMETRIC (7)
H-6-1559

FILE COPY

ENGINEERING CHANGE NOTICE

Page 1 of 5

1. ECN 173588
Proj. ECN

2. ECN Category (mark one)	3. Originator's Name, Organization, MSIN, and Telephone No.	4. Date
Supplemental ☒ Direct Revision ☐ Change ECN ☐ Temporary ☐ Supersedure ☒ Discovery ☐ Cancel/Void ☐	DOUGLAS B. BODILY, 87233, T3-02, 3-2188	10/22/92

5. Project Title/No./Work Order No.	6. Bldg./Sys./Fac. No.	7. Impact Level
ML RCA BACK FLOW PREVENTER REMOVAL	616	4

8. Document Number Affected (include rev. and sheet no.)	9. Related ECN No(s).	10. Related PO No.
SEE BLOCK 12	173587	N/A

11a. Modification Work	11b. Work Package Doc. No.	11c. Complete Installation Work	11d. Complete Restoration (Temp. ECN only)
☒ Yes (fill out Blk. 11b) ☐ No (NA Blks. 11b, 11c, 11d)	2X-92-00084	AUG 25 1993 N. B. Bodily 8/25/93 Cog. Engineer Signature & Date	N/A Cog. Engineer Signature & Date

12. Description of Change

ECN 173588 SUPERSEDES ECN 173587 IN ITS ENTIRETY ON ~~E~~ WHS H-6-1559 SHT. 1, REV 3.

1) REVISE DETAIL 6 "BACKFLOW PREVENTER ISOMETRIC" ON DRAWING NUMBER H-6-1559 REV. 0, SHT. 3 PER ATTACHED PAGE 3.

2) REVISE DRAWING H-6-1559 REV. 3 SHT. 1 PER ATTACHED PAGES 4 & 5.

FILE COPY

13a. Justification (mark one)	13b. Justification Details
Criteria Change ☒ Design Improvement ☐ Environmental ☐ As-Found ☐ Facilitate Constr. ☐ Constr. Error/Omission ☐ Design Error/Omission ☐	DETAIL 6 IS LOCATED ON SHT. 3 OF DRAWING H-6-1559 AND NEEDS TO BE REVISED TO REFLECT BACKFLOW PREVENTER REMOVAL.

14. Distribution (include name, MSIN, and no. of copies)

D. B. BODILY	T3-02	1
N. L. WESTON	T3-02	(FILE COPY) 1
G. S. TURNER	T3-29	1

RELEASE STAMP

OFFICIAL RELEASE BY WHC
DATE OCT 26 1992
Station 6

A-7900-013 (11/88)

ENGINEERING CHANGE NOTICE

1. ECN (use no. from pg. 1): 173588

15. Design Verification Required
- ☐ Yes
- ☒ No

16. Cost Impact

	ENGINEERING	CONSTRUCTION
Additional	☐ $ N/A	☐ $ N/A
Savings	☐ $	☐ $

17. Schedule Impact (days)
- Improvement ☐
- Delay ☐

18. Change Impact Review: Indicate the related documents (other than the engineering documents identified on Side 1) that will be affected by the change described in Block 12. Enter the affected document number in Block 19.

SDD/DD	☐	Seismic/Stress Analysis	☐	Tank Calibration Manual	☐
Functional Design Criteria	☐	Stress/Design Report	☐	Health Physics Procedure	☐
Operating Specification	☐	Interface Control Drawing	☐	Spares Multiple Unit Listing	☐
Criticality Specification	☐	Calibration Procedure	☐	Test Procedures/Specification	☐
Conceptual Design Report	☐	Installation Procedure	☐	Component Index	☐
Equipment Spec.	☐	Maintenance Procedure	☐	ASME Coded Item	☐
Const. Spec.	☐	Engineering Procedure	☐	Human Factor Consideration	☐
Procurement Spec.	☐	Operating Instruction	☐	Computer Software	☐
Vendor Information	☐	Operating Procedure	☐	Electric Circuit Schedule	☐
OM Manual	☐	Operational Safety Requirement	☐	ICRS Procedure	☐
FSAR/SAR	☐	IEFD Drawing	☐	Process Control Manual/Plan	☐
Safety Equipment List	☐	Cell Arrangement Drawing	☐	Process Flow Chart	☐
Radiation Work Permit	☐	Essential Material Specification	☐	Purchase Requisition	☐
Environmental Impact Statement	☐	Fac. Proc. Samp. Schedule	☐		☐
Environmental Report	☐	Inspection Plan	☐		☐
Environmental Permit	☐ N/A	Inventory Adjustment Request	☐ N/A		☐ N/A

19. Other Affected Documents: (NOTE: Documents listed below will not be revised by this ECN.) Signatures below indicate that the signing organization has been notified of other affected documents listed below.

Document Number/Revision	Document Number/Revision	Document Number/Revision
N/A		

20. Approvals

OPERATIONS AND ENGINEERING	Signature	Date
Cog./Project Engineer	[signature]	10/22/92
Cog./Project Engr. Mgr.	[signature]	10/22/92
QA		
Safety		
Security		
Proj.Prog./Dept. Mgr.		
Def. React. Div.		
Chem. Proc. Div.		
Def. Wst. Mgmt. Div.		
Adv. React. Dev. Div.		
Proj. Dept.		
Environ. Div.		
IRM Dept.		
Facility Rep. (Ops)		
Other		
WATER PURVEYOR:	[signature] #2839	10/26/92

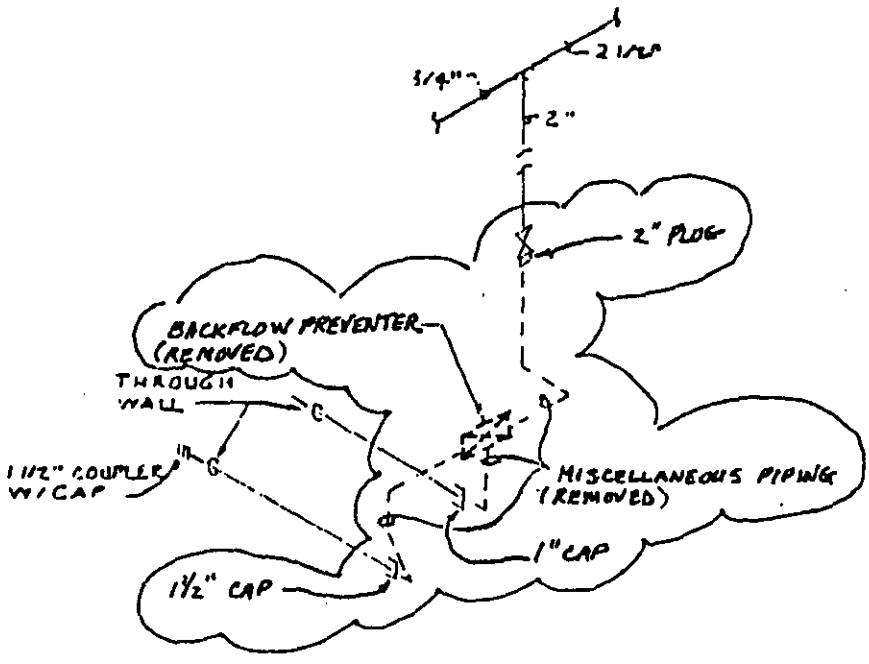
ARCHITECT-ENGINEER	Signature	Date
PE		
QA		
Safety		
Design		
Other		

DEPARTMENT OF ENERGY

ADDITIONAL

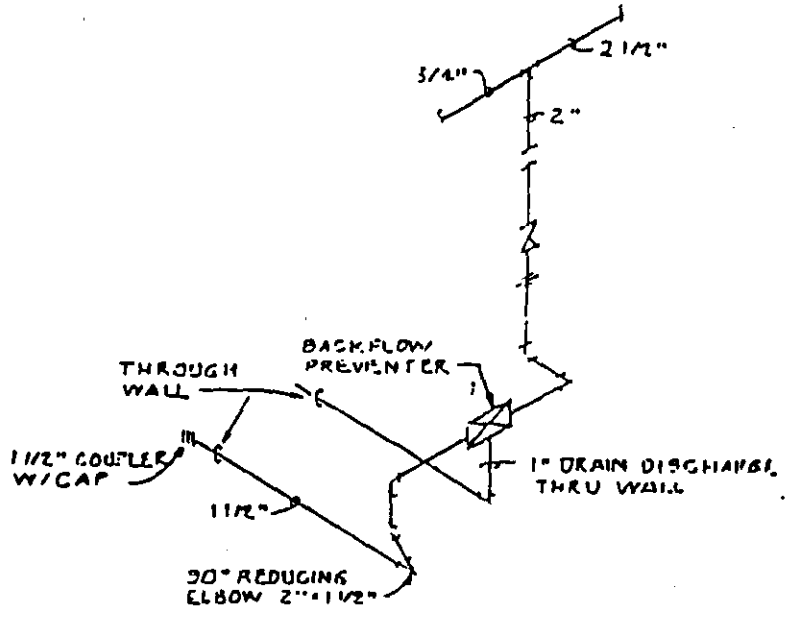
1)

IS:



BACKFLOW PREVENTER ISOMETRIC (a)
H-6-1559

WAS:



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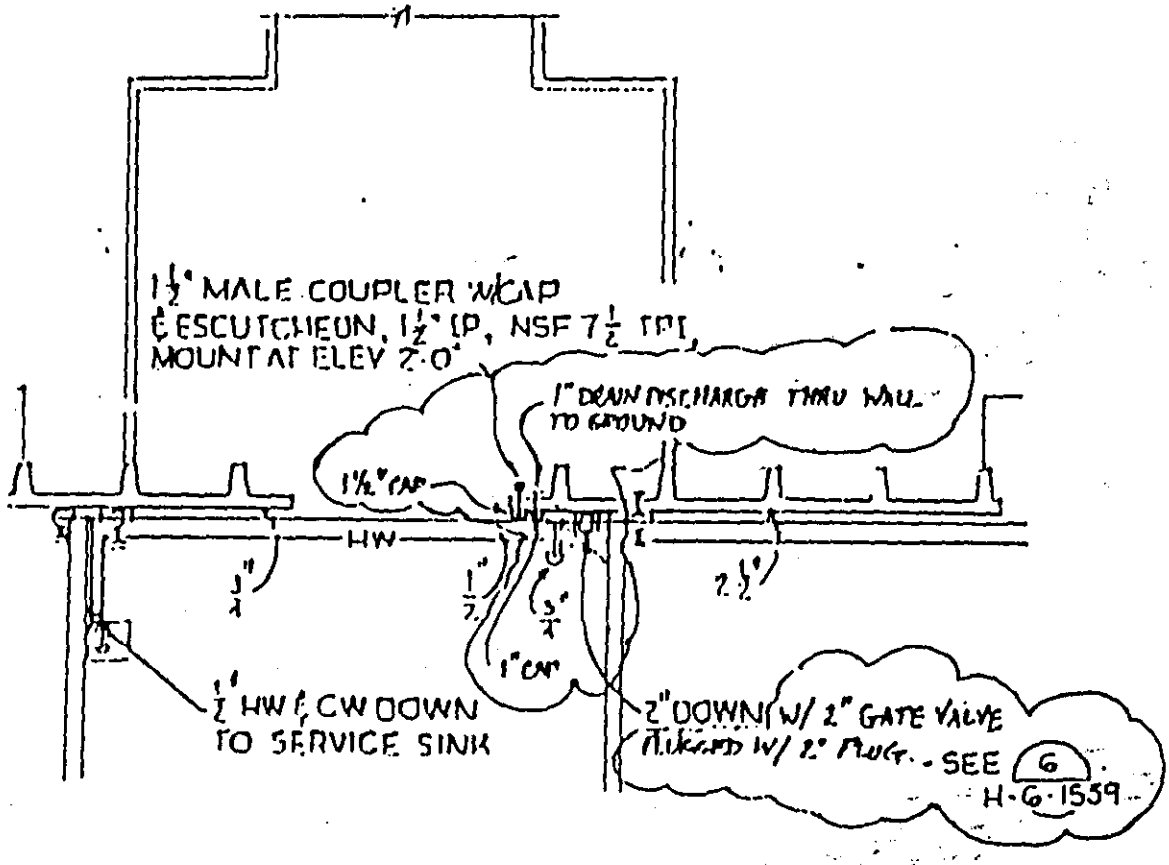

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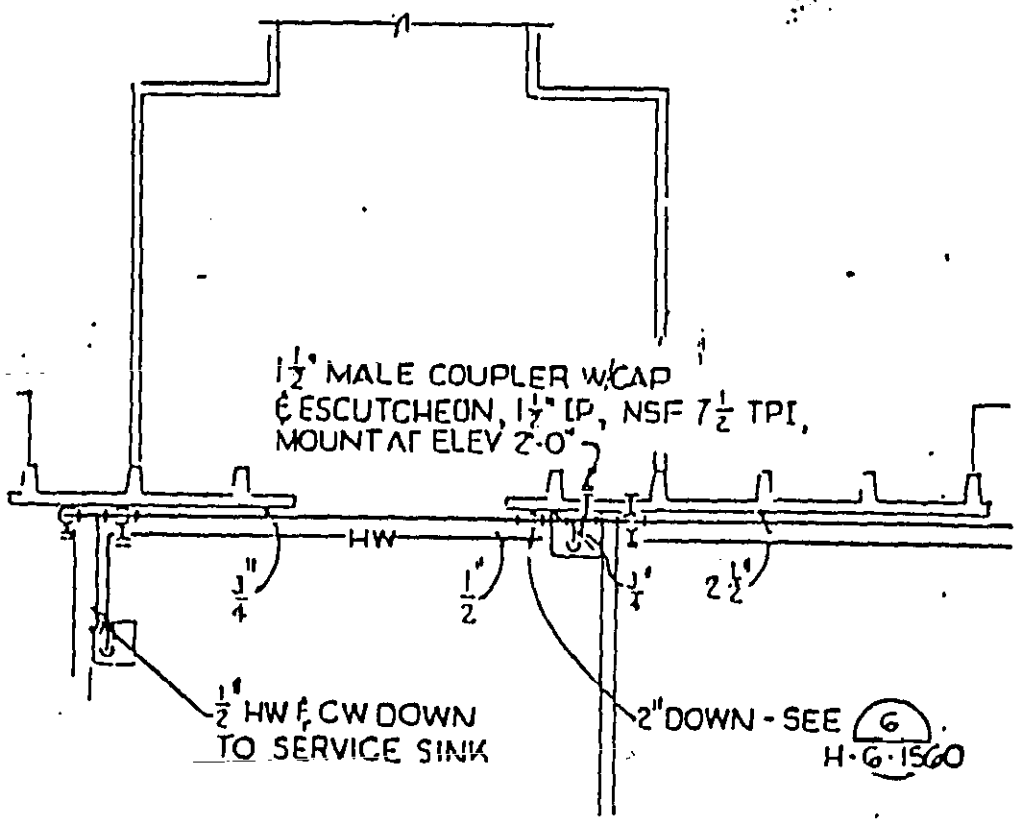

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FIED AS TO FLOW PATH, BUT ACTUAL ROUTING IS NOT
IFIED.

ESSENTIAL DRAWING

	DATE
RRY TATE	8/11/86
HARLOW	8/11/86
HARLOW	8/11/86
WOOD	10/9/86

U.S. DEPARTMENT OF ENERGY
DOE Field Office, Richland
Westinghouse Hanford Company

ELECTRICAL RADIO FIRE ALARM PLAN AND DIAGRAM

SIZE	BLDG NO	INDEX NO	DWG NO	REV
F	616	7701 7702	H-6-1608	3

SCALE NONE | EDT | SHEET 1 OF 1

CHK PRINT ☐ DATE | COMMENT PRINT ☐ DATE | 1

SPECIFICATIONS & NFPA 13 REQUIREMENTS FOR WET SYSTEM, BEAM & GIRDER CONSTRUCTION, ORDINARY HAZARD GROUPS 1 & 3 AND EXTRA HAZARD GROUP 1.

2) ALL MATERIALS TO BE NEW, UL AND FM LISTED AND APPROVED.

3) ALL DIMENSIONS ARE CENTER TO CENTER FOR ALL PIPING UNLESS OTHERWISE NOTED WITH ( ).

4) MAXIMUM 130 DIAMETER PER SPRINKLER IN ORDINARY HAZARD AREAS.

5) MAXIMUM 100 DIAMETER PER SPRINKLER IN EXTRA HAZARD AREAS.

6) WALL PENETRATIONS SHALL BE SEALED W/ 3M FIRE BARRIER CAULK CP-25.

7) UPRIGHT SPRINKLER DEFLECTOR SHALL BE A MAX OF 1" BELOW CONCRETE TEE.

8) PIPE SHALL BE SCH 10 AND SCH 40, ASTM-A-120 AND ASTM-A-53.

9) 8x8 GUARD ON SPRINKLERS IN THE CLASS 1A FLAMMABLE CELL ONLY, SEE DETAIL 2 ON SHEET 2.

REV 0
SH 1 OF 2
DWG NO H-6-10610

OFFICIAL RELEASE
BY WHC
DATE JUL 15 1994

ESSENTIAL DRAWING

N A NANCE	DATE 3/31/94
Tilley	4/29/94
W. Hyder	5/5/94
Jackson	5/5/94

M

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A

FIRE PROTECTION SPRINKLER SYSTEM

SIZE	BLDG NO	INDEX NO	DWG NO	REV
F	616	8509	H-6-10610	0

SCALE 1/4" = 1' EDT 605054 SHEET 1 OF 2

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BY WHC
DATE JUL 15 1994

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NANCE	DATE
	4-20-94
Tilley	4/29/94
Hayes	5/5/94
Jackson	5/5/94

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Westinghouse Hanford Company

M

A

FIRE PROTECTION DETAILS AND SECTIONS

SIZE	BLDG NO	INDEX NO	DWG NO	REV
F	616	8509	H-6-10610	0

SCALE NONE | EDT 605054 | SHEET 2 OF

CHK PRINT	DATE	COMMENT PRINT	DATE

1

ENCLOSURE 2
ATTACHMENT 16

This plan covers the following buildings and structures: 616 Nonradioactive Dangerous Waste Storage Facility

Approved:

Building Emergency Director	8-19-93 Date
Emergency Preparedness	8/20/93 Date
Health, Safety, and Fire Protection	8-19-93 Date
RCRA Compliance	8/20/93 Date
Hanford Fire Department	8/20/93 Date

This document will be reviewed and updated at least annually by the Building Emergency Director and approved by the Manager of Emergency Preparedness or delegate.

TABLE OF CONTENTS

FIGURES

1.0 INTRODUCTION

The 616 Nonradioactive Dangerous Waste Storage Facility (NRDWSF) Emergency Plan provides a system of planned responses to minimize risks to personnel, equipment, buildings, and the environment in the event of an emergency. This plan applies to the entire facility identified in Section 1.1, including all employees and visitors.

This plan, in conjunction with the WHC-CM-4-1, Emergency Plan, WHC-EP-0564, Hanford Facility Contingency Plan, and the Department of Energy - Richland Field Office (DOE-RL) Emergency Plan and Procedures Manuals, is intended to meet all applicable requirements for building emergency plans and the Washington State requirements for Hazardous/Dangerous Waste Contingency Plans. The Building Emergency Director, as mentioned throughout this plan, has the duties described in WAC 173-303 of the "Emergency Coordinator."

The emergencies considered for the 616 NRDWSF and identified as requiring emergency response plans are identified in Section 3.0. The three categories of emergencies considered are:

- Operational emergencies (including security events)
- Natural hazards
- Nonradioactive hazardous material hazards

Planned responses are those activities that are intended to provide direction to control a fire, to minimize the immediate effects of an explosion, and to contain a spill or release. These responses include, for example, notification of personnel, emergency organizations, and the Building Emergency Director.

This plan also provides guidance for notifying personnel to take cover, evacuate, or take other appropriate actions, as determined by the particular circumstances. The planned responses also provide for formal notification and reporting, investigation of the incident, cleanup, and restoration.

The 616 Building is located in the 600 area of the Hanford Site. A discussion of the 616 Building Facility is contained in Section 1.4.

1.1 FACILITY NAME: U.S. Department of Energy Hanford Site
616 Nonradioactive Dangerous Waste Storage Facility

1.2 FACILITY LOCATION: Benton County, Washington; within the 600 Area of the Hanford Site.

The building covered by this plan is: 616 Nonradioactive Dangerous Waste Storage Facility.

1.3 OWNER/OPERATOR: U.S. Department of Energy
Richland Field Office
825 Jadwin
Richland, Washington 99352

CO-OPERATOR: Westinghouse Hanford Company
P. O. Box 1970
Richland, Washington 99352

1.4 DESCRIPTION OF THE FACILITY AND OPERATIONS

The 616 NRDWSF is designed and used for the receipt and storage of nonradioactive dangerous waste generated on the Hanford Site and for the preparation of shipments to permitted offsite treatment, storage, or disposal facilities. The 616 NRDWSF contains approximately 7,700 square feet. To support safe response to potential spills, the 616 NRDWSF features independent collection trenches, sloped floors, and curbing.

1.5 BUILDING EVACUATION ROUTING (BUILDING LAYOUT)

Figure 1 provides identification of emergency evacuation routes from the 616 NRDWSF to the staging area(s) and, if necessary, evacuation routes within the 616 NRDWSF.

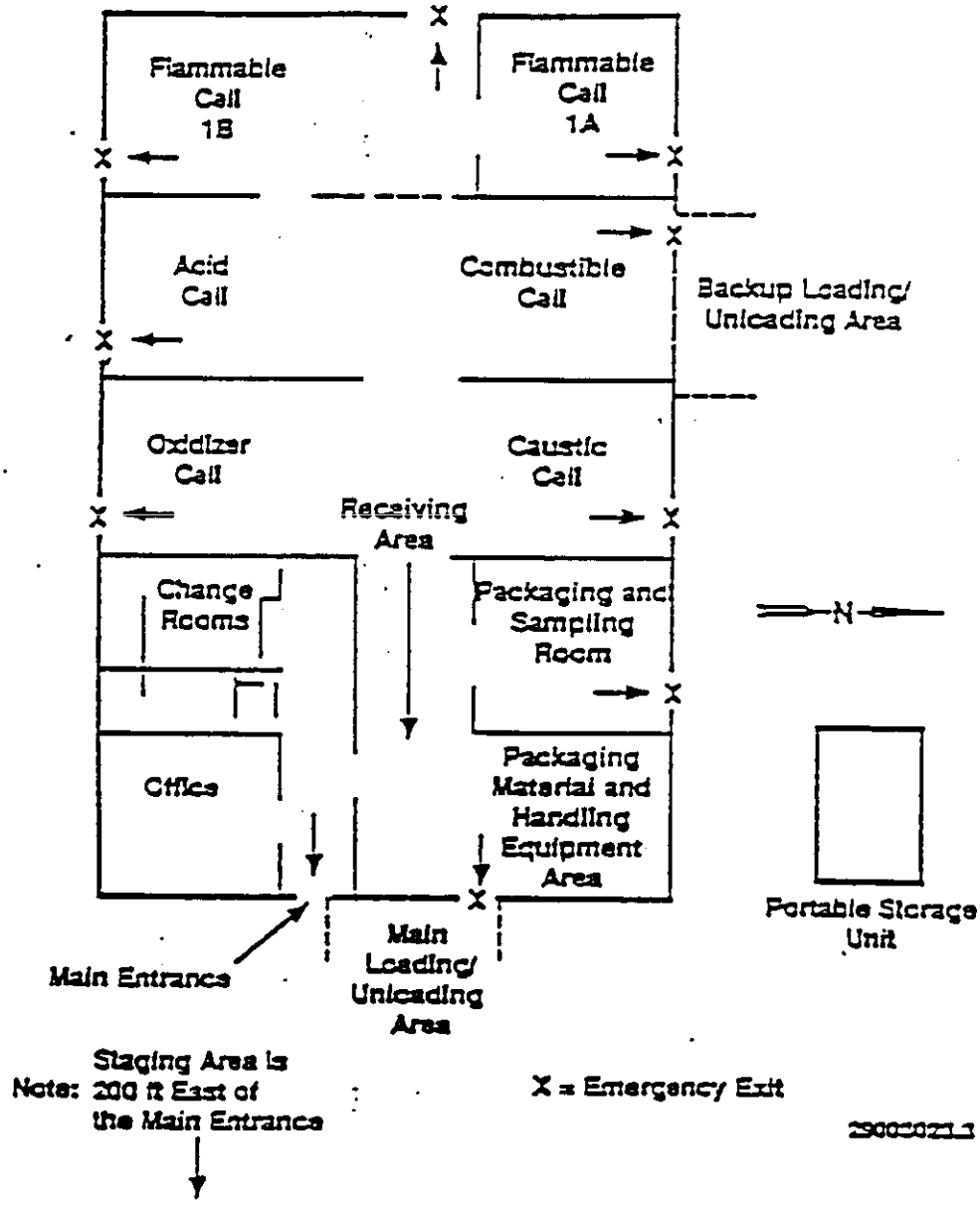
1.5.1 Building Evacuation Routes (Building Layout, and Exits)

Figure 1 shows the layout, exits, and staging area for the 616 NRDWSF. Evacuation could be through any of the emergency exits. Evacuation alarms are described in Section 5.4 and response to alarms is described in Sections 6.1 and 6.2.

1.5.2 Building Evacuation Routes (Building to Staging Area)

The primary staging area for the 616 NRDWSF is located 200 feet (61 meters) east of the main entrance. If it becomes necessary to evacuate the primary staging area, the staging area manager or the Building Emergency Director shall direct personnel to an alternate staging area or destination.

Figure 1. The 616 NRDWSF Layout, Exits, and Staging Area.



2.0 PURPOSE

2.1 PURPOSE OF PLAN

The purpose of the 616 NRDWSF Emergency Plan is to provide employees and visitors with the information necessary to respond to emergencies to:

- Maximize employee safety, minimize the risk to life, and provide prompt and efficient treatment for injured persons
- Ensure continuity of leadership at all times and in all emergencies
- Minimize the effects of an accident on the health and safety of the general public and to the environment
- Minimize property damage
- Ensure prompt internal and external communications with responsible authority.

2.2 EMPLOYEE REQUIREMENTS

Personnel assigned to the 616 NRDWSF are required to annually review applicable sections of this plan and document that review using the "Facility Emergency and Hazard Information Checklist" (form number A-6000-784), as defined in WHC-CM-4-1, Emergency Plan.

3.0 POTENTIAL EMERGENCY CONDITIONS

This section provides a general idea of the types and amounts of hazardous materials stored and used in the 616 NRDWSF.

Job safety analyses and/or Material Safety Data Sheets provide the basis for safe use of hazardous materials in the workplace. Each employee will know the appropriate actions to take in case of a spill or unwanted release (where specified).

3.0.1 Assessment Factors

After identifying the source and nature of the incident, the Building Emergency Director must assess any hazards to human health or the environment. Knowledge of these factors is vital to a practical assessment of such hazards and this knowledge includes the following:

- Origin of the leak, fire, or explosion (if known)
- Conditions of the source (e.g., controllable/uncontrollable leak or fire, easily moved/immovable)
- Materials involved
- Physical state of materials present (e.g., solid, liquid, or gas)

- Evidence of reaction(s) (e.g., fumes, flames, evolved gases)
- Odor and color of materials

3.0.2. Assessment Objectives

The assessment factors gathered at the scene, in conjunction with the detailed information available about materials involved, provide enough data to assess the probability of further hazards resulting from the emergency and to determine the appropriate response actions necessary.

Any emergency assessment should consider the potential for each of the following (as appropriate to the emergency conditions present).

- Spread of fire
- Explosion or further chemical reaction
- Increase in spill volume
- Generation of new compounds and their hazards
- Generation or spread of toxic, irritating, or asphyxiating gases
- Identification of exposure and/or release pathways
- Effect of exposure and appropriate safety precautions
- Contaminated run-off from spilled chemicals, response chemicals and/or fire, explosion, or reaction residues
- Impacts beyond the immediate area involved
- Damage to any stored records (including designated repositories, file cabinets, computer record storage files, computer magnetic media, etc.)
- Reactive wastes
- Greater than 10 pounds (4.5 kilograms) of Class IV oxidizers

NOTE: In cases involving soil contamination, assessment requires that sampling be performed to determine the lateral and vertical extent of contamination. The Building Emergency Director is responsible for coordinating onsite characterization activities, which will be performed by qualified Hanford Site organizations.

3.1 EVACUATION AND TAKE COVER

Evacuation alarms at the NRDWSF should be activated due to the following:

- A release of hazardous material (radioactive or nonradioactive) at this facility or at another facility impacting this facility
- Loss of utilities
- A protective response to emergencies affecting ability to inhabit this facility.

Take cover alarms at this facility should be activated due to the following:

- Release of hazardous material outside of a facility
- Attack by hostile factions
- Protective response to emergencies affecting the facility or personnel.

3.2 OPERATIONAL EMERGENCIES

The following emergencies are those considered credible for the 616 NRDWSF, unless determined to be Not Applicable (N/A). The types and extent of credible events are described. The response plan for each type is listed in Section 6.0 of this plan.

The following sections include a description of the 'worst case' accident anticipated for each of the identified credible emergencies. This information typically is derived from the facility safety analysis report, hazards evaluation, or risk assessment for the facility.

3.2.1 Bomb Threat

Hazards associated with bomb threats include flying objects and exposure to dangerous wastes.

3.2.2 Industrial Accidents

Hazards associated with industrial accidents include the potential for injuries from moving equipment, falls, or exposure to hazardous chemicals.

3.2.3 Loss of Electricity

Hazards associated with a loss of electricity include potential exposure to toxic chemical vapors due to shutdown of the ventilation system.

3.2.4 Loss of Water

Loss of water could disable the wet-pipe sprinkler system, resulting in an increased fire hazard.

3.2.5 Loss of Ventilation

Loss of ventilation could result in exposure to toxic chemical vapors/particulates in the event of a hazardous material spill/release.

3.2.6 Loss of Steam - N/A

3.2.7 Loss of Air - N/A

3.2.8 Fire

Fire hazards include exposure to toxic chemicals, smoke inhalation, burns, explosion, and damage to equipment. Sealed containers also could become pressure hazards.

3.2.9 Major Process Upset - N/A

3.2.10 Pressure Hazards

In the event of a chemical reaction or fire, sealed containers could suddenly rupture or explode, producing flying objects, releasing dangerous wastes, and/or causing or spreading a fire.

3.2.11 Security Event

A security event might involve injury, fire, explosion, or environmental damage.

3.2.12 Records Damage/Loss

Records for the 616 NRDWSF that must be safeguarded from loss/damage are located in the 616 Building office.

- Fire/Smoke
- Water discharge/leak
- Contamination (nonradioactive)

3.3 NATURAL HAZARDS EMERGENCIES

The following emergencies are those applicable to facilities on the Hanford Site. Response plans for each are contained in Section 6.0 of this plan.

3.3.1 Seismic Event

A seismic event might involve hazards caused by falling objects, damage to containers or failure of utilities.

3.3.2 Volcanic Eruption/Ashfall

Hazards associated with a volcanic eruption and resulting ashfall include interference with the building ventilation system.

3.3.3 High Winds/Tornado

Potential hazards associated with high winds or tornadoes might include loss of electricity, damage caused by flying objects, and pressure differentials associated with tornadic conditions.

3.3.4 Flood - N/A

3.3.5 Range Fire

Potential hazards associated with a range fire include burns, smoke inhalation, and release of hazardous materials to the environment due to container damage.

3.4 HAZARDOUS MATERIALS AND MIXED WASTE SPILLS/RELEASES

Hazardous material storage and control are managed by plant operating procedures and Material Safety Data Sheets, which are located in the 616-NRDWSF Packaging Materials/Handling Equipment Area. Spills or releases could result in the conditions described in the following section:

3.4.1 Spill of Hazardous Material

Hazards associated with the spill of a hazardous material include exposure to corrosive and toxic materials or fumes and potential environmental damage.

3.4.2 Fires or Explosions Involving Hazardous Material

A fire or explosion in the 616-NRDWSF could produce flying objects and cause the release of hazardous waste to the air or soil.

3.4.3 Toxic Fumes Hazards

Hazards associated with toxic fumes include potential exposure to personnel and the environment.

3.4.4 Reactive Chemical/Corrosive Material Hazards

Improper segregation of incompatible materials could cause an explosive reaction. Hazards are the same as for spills (Section 3.4.1).

3.4.5 Thermal Reactions/Hazards

Thermal reactions could cause burns, chemical burns, toxic fumes, and cause pressure hazards in sealed containers.

3.4.6 Flammable Material/Liquids Hazards

Hazards associated with flammable materials and liquids include fire, explosion, and release of hazardous waste.

3.4.7 Asbestos Release

The 616-NRDWSF structure does not contain asbestos, but dangerous waste containing asbestos could be stored inside the drums stored within the structure. Release of friable asbestos waste could result in an inhalation hazard.

3.5 RADIOACTIVE MATERIALS

Radioactive materials ARE NOT used and/or stored in the 616-NRDWSF.

3.5.1 Gaseous Effluent Discharges (Stack Releases) - N/A

3.5.2 Liquid Effluent Discharges - N/A

3.5.3 Significant Contamination Spread/Releases - N/A

3.6 CRITICALITY - N/A

3.7 EXPLOSIVE MATERIALS/MUNITIONS HAZARDS - N/A

Explosions could potentially occur in the flammable materials stored in the 616 NRDWSF, but explosives per se, including munitions (as defined by the U.S. Department of Transportation regulations) are not stored in the 616 NRDWSF.

4.0 DESCRIPTION OF WHEN AND HOW BUILDING EMERGENCY PLAN WILL BE IMPLEMENTED

4.1 IMPLEMENTATION

This emergency plan will be used whenever the Building Emergency Director determines that one of the incidents listed in Section 3.0 has or will occur and that the severity is or will be such that there is a potential to endanger human health or the environment. The Building Emergency Director must assess each incident to determine the response necessary to protect the personnel, structures, and the environment.

If assistance from Hanford Patrol, Hanford Fire Department, or ambulance units is required, the Hanford Emergency Response Number (911) must be used to contact the Patrol Operations Center and request the desired assistance.

To request other resources or assistance from outside the 616-NRDWSF, the Patrol Operations Center business number (373-3800) is used to contact the Emergency Duty Officer. The 616 NRDWSF personnel may handle minor incidents under the direction of the Building Emergency Director and/or line management.

4.2 IDENTIFICATION OF HAZARDOUS MATERIALS

The Building Emergency Director should be aware of the location, types, and general amounts of all hazardous or dangerous materials or wastes in the 616-NRDWSF. If there is an emergency and the materials or wastes involved are unknown, identification is as follows:

- Question witnesses or individuals familiar with the operations or area where the incident occurred or is occurring.
- Check the container for labels or markings that are visible from a safe distance.
- Check documents that might reveal the materials involved. (For example, in a waste storage or accumulation area, note the location of containers involved and check those locations against the waste inventory log, chemical waste disposal analysis letter file or the waste transfer tracking/manifest file.
- If the waste cannot be identified, call the Hanford Fire Department's Hazardous Materials Response Team (911).

The Hazardous Material Response Team will sample the waste in accordance with sampling and testing methods specified in WAC 173-303-110 and/or SW-846 (EPA 1990). The samples will be packaged and taken to an analytical laboratory for analysis and identification (following proper chain-of-custody procedures).

4.3 EMERGENCY DOSE LIMITS - N/A

The 616 NRDWSF does not maintain any radioactive or mixed waste.

4.4 FACILITY ACCESS FOR DISABLED PERSONS

Management will make provisions that address assignment and/or temporary access of disabled persons and others who might have difficulty in exiting a building safely in the event of an emergency. These will include individuals who might have less obvious disabilities (such as severe emphysema, respiratory impairment or heart ailments).

Provisions may be made to review the assignment of an individual who may be temporarily disabled and reassign the individual to an area that provides for easier evacuation in emergencies.

Line management, the Building Emergency Director, Industrial Safety, and the individual concerned will review the assignment of the individual and must consider (at a minimum) the following:

- The degree and type of disability
- Location of the workplace within the building/structure
- Operational status

- Existing provisions for emergency evacuation
- Purpose of the assignment and/or availability of alternate locations for conducting business within the building or in other buildings
- Availability of another individual who could aid in emergency evacuation
- The need for a sign-in/sign-out personnel accountability.

5.0 EMERGENCY RESOURCES

5.1 BUILDING EMERGENCY ORGANIZATION

The personnel listed in Attachment A to this plan are the minimum recommended emergency staff of the building emergency response organization.

In an emergency in which this plan is used, the acting Building Emergency Director has the authority to commit the resources required to respond, including money, manpower, and/or equipment.

The roles and responsibilities of building emergency response organization members are described in the Emergency Plan (WHC-CM-4-1) and WHC-EP-0564, Hanford Facility Contingency Plan.

5.2 IDENTIFICATION AND DESCRIPTION OF EMERGENCY EQUIPMENT

A summary of the 616-NRDWSF fixed and portable emergency equipment is provided on the following pages. Figure 2 shows the locations of the emergency equipment.

5.2.1 Fixed Emergency Equipment

616 NRDWSF Fixed Emergency Equipment		
Type	Location	Capability
Wet-pipe overhead sprinkler system	Throughout building	Activated by heat. Designed to meet Extra Hazard, Group 2, NFPA requirements
Fire hydrant	Southeast exterior corner of the building enclosed in four yellow posts	Supply water for fighting fires
Eye wash/shower stations	Two units - one in combustible cell, and one in Packaging and Sampling Room	Immediate decontamination of personnel exposed to hazardous materials

5.2.2 Portable Emergency Equipment

616 NRDWSF Portable Emergency Equipment		
Type	Location	Capability
Fire extinguishers	Flammable Cell 1B Combustible Cell Hall near Change Rooms and Office Packaging and Material Handling Room	ABC Type
Dry Chemical	(See Above)	ABC Type
Halon	N/A	

5.2.3 Protective Equipment

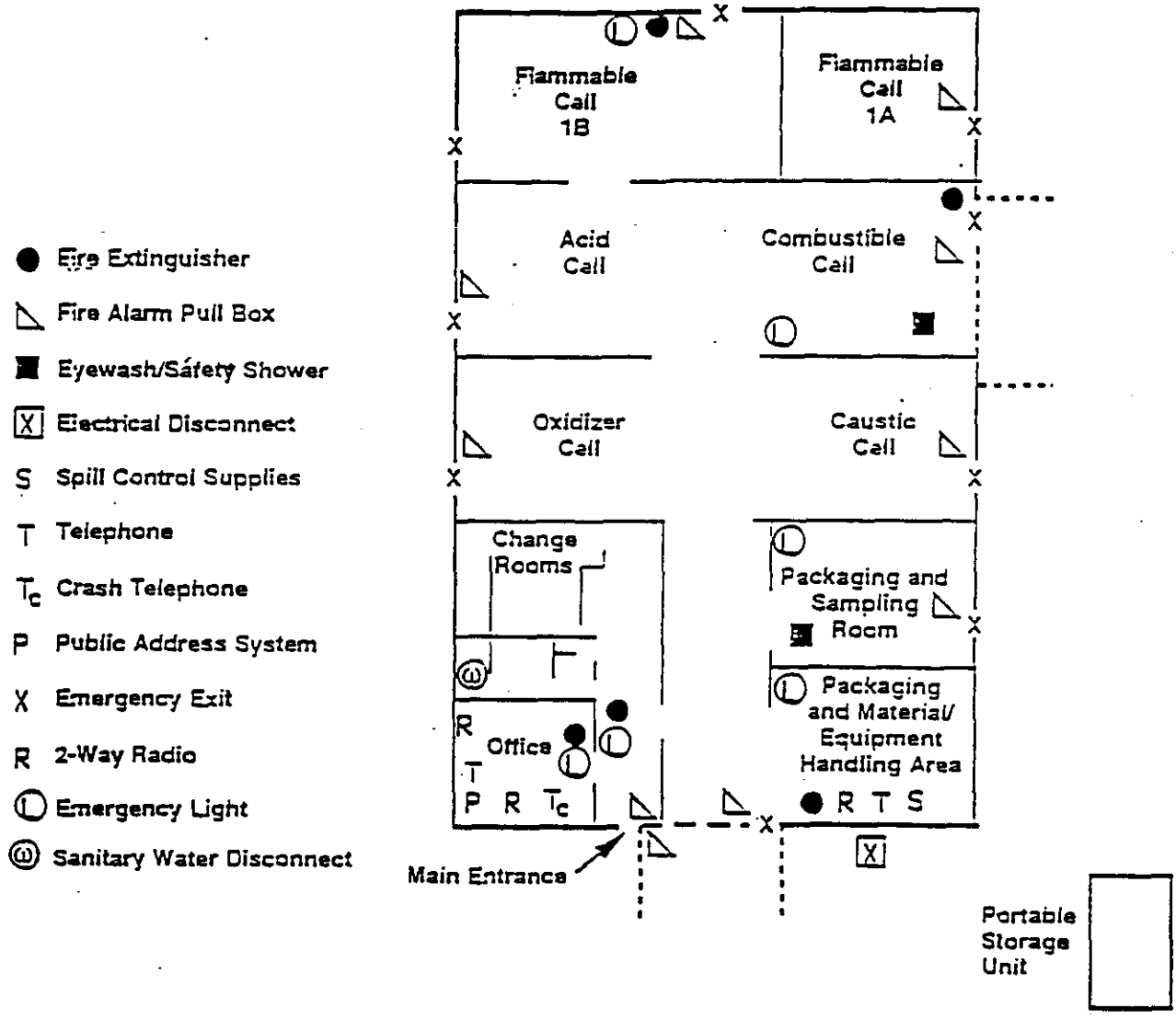
616 NRDWSF Protective Equipment		
Type	Location	Capability
Corrosive material gloves	Packaging and Material Handling Room	Provide protection for hands when exposed to corrosive materials
Solvent resistant gloves	Packaging and Material Handling Room	Provide protection for hands when exposed to solvents, alcohols, and water-based solutions
Abrasion resistant gloves	Packaging and Material Handling Room	Provide abrasion, cut and puncture protection for hands when handling containers and tools

5.2.4 Spill Control Equipment

Spill control equipment to be used for hazardous materials during an emergency and/or when the recovery phase has been identified.

616 NRDWSF Spill Control Equipment		
Type	Location	Capability
Drum dolly	Material/equipment storage area	Specialized hand truck for moving drums
Absorbent material - cat litter, diatomaccous earth	Material/equipment storage area	Absorbing spills
Overpack drums	Material/equipment storage area	Overpack damaged containers
Chemical transfer pumps (hand pumps)	Material/equipment storage area	Transfer liquids to secure containers
(electrical)	Packing and sampling room	Transfer liquids to secure containers
(explosion-proof)	Flammable cell 1-A	Transfer liquids to secure containers
Non-sparking tools	Material/equipment storage area	Handling flammables

Figure 2. The 616 NRDWSF Safety Equipment



5.3 EMERGENCY NOTIFICATIONS

5.3.1 Notification to Personnel Within The Facility

The 616-NRDWSF facility personnel must be notified immediately if any conditions that affect occupants or operations are discovered.

If you discover an emergency:

1. LEAVE THE IMMEDIATE AREA if you may be harmed.

2. ACTIVATE THE NEAREST FIRE ALARM if you discover a fire.

3. GO TO A SAFE PLACE AND CALL 911 or 373-3800. Speak slowly and clearly and provide the following:

   - Your name
   - The nature of the emergency
   - Exact location of the emergency

Have the person answering the call repeat the message back to you. The shift manager will assess the situation and determine if the Building Emergency Director must be notified.

Depending on the severity of the incident, personnel in the 616-NRDWSF, the area, or Hanford Site will be notified about the emergency, using one or more of the following emergency warning systems.

Building Public Address System. Used for incidents that affect only a limited area near the incident.

Hanford Site Standard Emergency Signals. These siren alerts are fully described in Section 5.4.1 and in WHC-CM-4-1, Emergency Plan, Section 6.0 and in WHC-EP-0564, Hanford Facility Contingency Plan, Sections 4.4 and 4.5.

Crash Alarm Telephone System. A telephone system used to disseminate emergency messages; dialing a single number connects the initiator to a predetermined number of telephones. Crash Alarm Telephones are identified with a black and white label on the handle. The 616 Building office (373-5013) has a crash alarm telephone.

5.3.2 Notifications to Personnel and Organizations Outside of the Facility

Once the Emergency Action Coordinating Team (EACT) is activated, RL is responsible for all notifications to organizations or agencies other than DOE-HQ and onsite contractors. Before the EACT is activated, the Occurrence Notification Center (ONC) at 376-2900 is responsible for these notifications.

The ONC also is responsible for reporting any release of hazardous or dangerous waste or materials (regardless of quantity) to the Washington State Department of Ecology, and reporting releases of hazardous or dangerous materials above reportable quantities to the National Response Center.

If there is a fire or explosion, the Building Emergency Director or line management must immediately call 911 to notify the Patrol Operations Center.

If there is any unplanned release of hazardous or dangerous wastes or materials, the Building Emergency Director must immediately notify the onsite contractor's Environmental Compliance Support organization at 373-4949. The Environmental Compliance Support organization notifies the Occurrence Notification Center. The Occurrence Notification Center must be notified of the release as soon as possible, not more than two hours after the release is discovered. The Building Emergency Director or line management must document the emergency in accordance with MRP 5.14 and their specific reporting procedures.

Tell the Occurrence Notification Center:

- Name, telephone number, and contractor of person reporting
- Location of the release
- Date and time of the release
- Type and amount of material released
- Reportable quantity of the material
- Cause of the release
- Health and environmental impact of the release
- Clean up action in progress or required
- Whether a press release will be made
- Agencies requiring notifications.

5.4 EMERGENCY ALARMS AND WHEN/HOW THEY WILL BE ACTIVATED

5.4.1 Standard Emergency Alarms

SIGNAL	MEANING	ACTIONS
STEADY TONE OR SIREN (3-5 MINUTES) OR BUILDING P.A. SYSTEM OR AT MANAGER'S REQUEST.	AREA EVACUATION: RADIOACTIVE MATERIAL RELEASE, HAZARDOUS MATERIAL RELEASE, BOMB THREAT.	GET CAR KEYS, IF TIME PERMITS, AND GO TO EVACUATION STAGING AREA.
WAVERING TONE OR SIREN (3 TO 5 MINUTES)	TAKE COVER: HAZARDOUS MATERIALS RELEASE, OR SECURITY EVENT WHERE EVACUATION CAN NOT BE COMPLETED IN A TIMELY MANNER.	TAKE COVER IN NEAREST BUILDING, SHUT DOORS AND WINDOWS AND SHUT OFF VENTILATION.
HOWLER (AH-OO-GAH)	CRITICALITY, NUCLEAR EXCURSION.	RUN AWAY FROM ALARM SOUND AND GO DIRECTLY TO A DESIGNATED STAGING AREA AS IDENTIFIED IN THE BUILDING EMERGENCY PLAN.
GONG	FIRE	EVACUATE UNLESS DIRECTED NOT TO DO SO BY THE BUILDING EMERGENCY DIRECTOR.
CONTINUOUS RINGING BELL AND FLASHING RED LIGHT.	POTENTIAL AIRBORNE RADIOLOGICAL CONTAMINATION.	HOLD YOUR BREATH AND PLACE ONE BARRIER BETWEEN YOU AND ALARM.
CRASH ALARM (200, 300, 400 AREAS) LONG/SHORT RINGING TELEPHONE.	EMERGENCY COMMUNICATIONS.	PICK UP PHONE AND LISTEN. RELAY MESSAGE TO BUILDING.
EMERGENCY DIRECTOR ANNOUNCEMENT	ALL CLEAR SIGNAL FOR ANY OF THESE ALARMS OR SIGNALS WILL BE PASSED BY VOICE. THE FACILITY PUBLIC ADDRESS SYSTEM OR CRASH ALARM PHONES MAY BE USED FOR THIS PURPOSE.	THE ALL CLEAR SIGNAL.

5.4.2 Facility Specific Emergency Alarms

The specific alarms that employees should be aware of while in the 616 NRDWSF are the following:

- The fire alarm button outside of the main entrance to the 616 NRDWSF alerts building occupants and the fire station in case of fire.
- The fire alarm pull boxes in flammable cell 1A, flammable cell 1B, the acid cell, the combustible cell, caustic cell, oxidizer cell, packaging room, and just inside the main entrance alert the 616 NRDWSF occupants and the fire station in case of fire.
- The loss of ventilation indicator lights in the 616 NRDWSF office indicate when the office and cell ventilation systems are operable.
- The evacuation/take cover alarm in the 616 NRDWSF office is operated manually to initiate the applicable emergency response.

SIGNAL	MEANING	ACTIONS
Steady siren	Evacuate	Evacuate as directed
Wailing siren	Take cover	Seek shelter immediately

6.0 EMERGENCY RESPONSE PLANS

This section contains Emergency Response Guides that pertain to the 616 NRDWSF.

6.1 EVACUATION (Hanford Standard: STEADY SIREN)

6.1.1 Building Evacuation

If an evacuation is ordered or the evacuation siren sounds in the 616 Building, employees should proceed to the:

616 NRDWSF STAGING AREAS	AREA	LOCATION
PRIMARY STAGING AREA	616 Building	200 feet east of main entrance
SECONDARY STAGING AREA	616 Building	Announced by the Building Emergency Director

6.1.2 Area Evacuation

The Building Emergency Director or Staging Area Manager directs this procedure during an evacuation. However, to ensure that evacuations can be conducted promptly and safely, all employees should be familiar with the procedure outlined in the following pages. The order to evacuate normally will be passed via the Crash Alarm Telephone system.

Area evacuations are rapid or controlled; differences between them are pointed out in the following steps. When possible, the following steps should be conducted concurrently.

AREA EVACUATION PROCEDURE
Halt any operations or work and place the building in a safe condition. Use emergency shutdown procedures for rapid evacuation.
Use whatever means are available (PA system, bullhorns, runners, etc.) to pass the evacuation information to employees.
Sound the evacuation siren (if available), or issue the order to evacuate by any available means.
Evacuate personnel to the staging area.
Conduct personnel accountability (controlled evacuations only). Report personnel accountability results to your Area Emergency Control Center (ECC) (373-3876, 373-1786, or 544-8055).
Segregate personnel into four groups: Special Work Permit Clothing clad personnel, persons with keys to immediately available private vehicles, persons with keys to government vehicles, all others.
Relay pertinent evacuation information (routes, destination etc.) to personnel with vehicle keys and evacuation drivers.
Direct evacuation drivers to warm up vehicles.
Load personnel in civilian clothes into private and government vehicles, load Special Work Permit Clothing clad people into separate vehicles if possible. Try to provide reserve transportation for people with late shutdown duties.
Dispatch private and government vehicles as soon as they are loaded.
Load remaining people into evacuation vehicles, maintaining segregation if possible.
Dispatch vehicles and instruct drivers to pick up pedestrians along their route. If possible, provide drivers with portable radios so that they can communicate with the Emergency Control Center on frequencies mentioned above.
Report status to the Emergency Control Center, request additional transportation if required and report if any people remain who are performing late shutdown duties.

6.2 TAKE COVER (Hanford Standard Emergency Signal: WAILING SIREN)

6.2.1 Take Cover Response

When the Take Cover Alarm is activated, personnel should take cover in the nearest building or trailer. The following actions should be taken or considered:

- Close all exterior doors and windows

- Report your location to line manager or Building Emergency Director
- If possible, secure (turn off) unnecessary electronic or electrical equipment
- Turn off cell and office area ventilation systems

6.2.2 Attack by Hostile Factions - Take Cover

Normally, this building will be alerted of an impending attack via the Area Crash Alarm Telephone System at 373-5013 in the 616 Building office.

6.3 BOMB THREAT RESPONSE GUIDES

A bomb search kit can be found at the 272-WA Building. This kit contains some or all of the following.

- Flashlights
- Bump hats, and gloves
- Set of maps
- Marking pens (for marking up search plans on maps)
- Mirrors and extension handles
- Crescent wrenches (for mirror adjustments)
- Thread or string (to mark paths to objects for investigation)
- Green tape (for repairs, holding string, etc.)
- Masking tape (for taping off searched areas)

6.3.1 Actions for a Telephoned Bomb Threat

If you get a telephoned bomb threat, respond as follows.

NOTE: Attempt to engage the caller in conversation on the phone as long as possible, and get as much information as you can. Use the bomb threat checklist for questions to ask.

1. Record as much information about the call (threat, caller mannerisms and voice features, background noise, etc.) on the Bomb Threat Checklist (Form BD-9100-201R).
2. Initiate evacuation.
3. Notify the Building Emergency Director.
4. Notify the Patrol Operations Center (911) once the call is over.

6.3.2 Actions for a Written Bomb Threat

If you get a written bomb threat, respond as follows.

1. Handle the letter as little as possible to preserve fingerprints and avoid smudging.

2. Immediately notify the Patrol Operations Center (911) and the Building Emergency Director. Tell no one else.

3. Record all details of the receipt (i.e., where found, how delivered, when found, etc.)

4. Release the letter only to Security personnel or to a person authorized by Security Personnel.

6.3.3 Actions for Discover of a Bomb or Suspicious Object

If you discover a bomb or suspicious object, respond as follows.

1. Clear the immediate area of personnel. Do not transmit on a radio near the object.

2. Immediately notify the Patrol Operations Center (911) and the Building Emergency Director.

3. Ensure that no one enters the area by standing guard in a sheltered location at the maximum possible distance.

6.4 OPERATIONAL EMERGENCY RESPONSE PLAN

The following sections contain response plans for each type of emergency or hazard identified in Section 3.0 of this plan.

6.4.1 Utility Disconnect Plan For 616 NRDWSF

Use these steps to place the utilities in a safe and secure condition when an emergency has been declared, or when directed by the Building Emergency Director.

6.4.1.1 Heating, Ventilation, and Air Conditioning

1. Inspect all waste storage cells. If any containers are leaking or ruptured, notify supervision.

2. After inspecting containers, close all cell doors inside the 616 NRDWSF.

3. Open all exterior doors.

4. Evacuate storage areas.

5. If ventilation loss will be longer than one hour, evacuate the building (unless shutdown is part of the take cover alarm response for this facility).

6. Maintain surveillance of the building to prevent unauthorized personnel entry.

7. Proceed to roof or main panel marked "Heat Pump" near men's room.

8. Locate ON/OFF switch.

9. Place switch in OFF position.

10. Do not reenter the building until the ventilation system has been reestablished and operating for at least 30 minutes.

6.4.1.2 Electrical

NOTE: This building should be shut down only in an extreme emergency.

1. Follow Section 6.3.1.1 instructions for shutdown of the ventilation system.

2. Proceed to outside the northeast corner wall or to the hallway near the men's room.

3. Locate the main electrical distribution panel labeled "Main Switch Transformer."

4. Locate the ON/OFF switch labeled "2 of 2."

5. Place switch in the OFF position.

6. Do not reenter the building until power or ventilation has been restored for at least 30 minutes.

6.4.1.3 Fire Sprinkler System

NOTE: This building should be shut down only in an extreme emergency and preferably by the Hanford Fire Department.

1. Proceed to the outside of the south wall of the 616 Building.

2. Locate the red valve (inside of four red posts).

3. Break the seal with the attached wrench.

4. Turn the valve to the SHUT position.

6.4.1.4 Sanitary Water/Sewer

1. Proceed to women's change room.

2. Locate the main valve on the south wall labeled "Sanitary Water Shutoff."

3. Turn valve until closed.

6.4.1.5 Process Water - N/A

6.4.1.6 Steam - N/A

6.4.2 Industrial

Inform the Building Emergency Director and take other actions as directed.

6.4.3 Loss of Electricity

Loss of electricity will result in loss of operation of the building ventilation system.

1. Evacuate the building.
2. Maintain surveillance of the building to prevent unauthorized personnel entry.
3. Notify the Building Emergency Director.
4. If instructed by supervision, close all cell doors inside the building and open all exterior doors.
5. Do not reenter the building until the electrical/ventilation systems have been reestablished and have been operating for at least 30 minutes.

6.4.4 Loss of Water

1. Notify the Building Emergency Director.
2. Notify the Hanford Fire Department.
3. Establish a fire watch.
4. Notify appropriate maintenance personnel for repair.

6.4.5 Loss of Ventilation

Follow the Section 6.4.3 instructions for Loss of Electricity.

6.4.6 Loss of Steam - N/A

6.4.7 Loss of Air - N/A

6.4.8 Fire

NOTE: Also see Section 6.6.2 for response to fire because any 616 Building fire could involve hazardous materials.

The 616 Building Emergency Director (or alternate) is responsible for ensuring that the following actions are performed. However, all personnel are responsible for the initial steps and notifying others if a fire is detected or an explosion occurs at this facility.

Person discovering a fire or an explosion

- Activates the nearest fire alarm box
- Calls 911 and requests the Hanford Fire Department
- Notifies the Building Emergency Director

Building Emergency Director

- Goes to the scene, assesses the situation, and requests necessary help
- Assigns someone to meet the Hanford Fire Department personnel and directs them to the alarm or fire

Facility occupants

- Respond to the fire alarm
- Stand by for further instructions

Once the fire is controlled and/or extinguished or the cause of the explosion has been eliminated AND there is no longer an imminent threat to human health the balance of this procedure is implemented.

Building Emergency Director

- Announces an "all clear" signal
- Isolates any hazardous materials and stabilizes the materials until the material can be removed in a non-emergency mode and properly treated or disposed of
- Cleans and repairs emergency equipment and returns the equipment to a condition fit for reuse
- Replaces all expendable supplies

6.4.9 Major Process Disruption - N/A

6.4.10 Pressure Hazards Emergency Response

1. Evacuate the area of the hazard.
2. Notify the Building Emergency Director.
3. Follow Section 6.6.2 for response to fires because any fires in the 616 NRDWSF could involve hazardous materials.

6.5 NATURAL HAZARDS RESPONSE PLAN

6.5.1 Volcanic Eruption/Ash Fall

Volcanic eruptions and ash fallout from the Cascade Mountain Range is a possibility. The Crash Alarm Telephone system is used to notify the facilities if ash fallout is imminent. Take the following actions if notified that an ash plume will reach the Hanford Site.

Building Emergency Director

- Contact the Emergency Control Center and obtain meteorology data necessary to estimate time of arrival for the ash plume.
- Decide whether to follow the "Evacuation" response in Section 6.1 or the "Take Cover" response in Section 6.2, as appropriate.
- Protect supply air inlets and reduce ventilation flows as needed.
- Evaluate necessity of shutting down operations. If required, notify appropriate personnel to begin shutdowns.
- Maintain communication with the Emergency Duty Officer or the Area Emergency Control Center to discuss building condition and changing fallout conditions.

6.5.2 Seismic Event Response

The on-site emergency response organization's primary role in a seismic event is coordinating the initial response to injuries, fires and fire hazards, and acting to contain or control radioactive and/or toxic material releases.

6.5.2.1 Seismic Event Response During the Event.

Each building emergency organization must be ready to respond following a seismic event affecting the Hanford Site and the operating contractor's facilities, personnel and property.

The following guidelines identify the responses (by appropriately trained individuals) necessary to respond to a seismic event at the 616 NRDWSF.

- Promptly assess post-earthquake emergency needs
- Act as necessary to protect building personnel and those onsite and offsite
- Report needs to 911 or the Area Emergency Control Center
- Search for injured or trapped employees

- Conduct accountability
- Render first aid
- Search for fires and other hazards
- Fight fires
- Turn off water, gas, and electricity
- Perform facility inspection
- Consider shutdown of operating systems
- Arrange for rescue of personnel
- Form a recovery plan
- Perform cleanup

6.5.2.2 Response During a Seismic Event.

During an earthquake, building personnel should:

- Remain calm
- Stay away from windows and steam lines
- Respond to all emergency signals
- Avoid objects that could fall or release hazardous material.

6.5.2.3 Response After a Seismic Event.

After an earthquake:

- Follow the Building Emergency Director's instructions
- Check others for injuries and administer first aid
- Call 911 for emergency assistance; notify management
- Do not use matches or lighters
- Do not touch downed power lines or objects touched by downed wires
- Do not use the telephone or public address system (except for emergency communications)
- Establish damage assessment teams for the local area and areas beyond the facility

- Determine if release of inventories of hazardous material is occurring or likely to occur
- Determine current local meteorology
- Warn adjacent facilities of event using Crash Alarm Telephone, radios, telephone, runners, and/or Hanford Patrol rover vehicles
- Initiate road closures (Highway 240, and/or onsite roadways) to reduce potential exposures
- Provide resources and personnel assistance to other affected personnel and facilities.

6.5.3 High Winds/Tornado

- Take cover as directed until the event subsides.
- Assess and identify damage to the 616 NRDWSF.
- Contact the Patrol Operations Center at 911 or the Emergency Duty Officer at 373-3800, as appropriate.

6.5.4 Flood - N/A

6.5.5 Range Fire

- Notify the Building Emergency Director.
- Close exterior doors to the building, as directed, to prevent sparks from being blown inside.
- Follow response procedures described in Section 6.4.8, Fire.

6.6 HAZARDOUS MATERIALS RESPONSE PLAN

6.6.1 Spill Response Plan

In the event of a nonradioactive hazardous material spill, facility personnel should respond as follows:

- Assess the severity of the situation and contact the supervisor, providing as much detailed information as possible (i.e., type of material, location, fire, etc.).
- Management shall contact the Hazardous Materials Response Team (HAZMAT) for an evaluation via 911 upon discovery of any spills, leaks, or structurally-deficient containers. The HAZMAT team will determine if any specialized recovery actions are required.
- Contact the HAZMAT Team (911) in the event of a ruptured container.

For larger leaks/spills the facility should respond as follows:

Building Emergency Director

- Assesses the situation; determine the type and quantity of material(s) released and the hazards involved.
- Activates the appropriate emergency alarms (if necessary), and notifies personnel in the immediate area.

Facility Personnel

- Respond to emergency alarm and stand by for further instructions.

Building Emergency Director

- Contacts the Hazardous Materials Response Team (HAZMAT) for an evaluation via 911 upon discovery of any spills, leaks, or structurally deficient containers.
- Initiates appropriate actions to contain/control the waste or material as directed by the HAZMAT team.
- Directs personnel to take those actions that can be safely performed to control or contain the release before assistance arrives.
- Directs an individual to meet emergency responders from outside the building and direct them to the event scene.

Hanford Fire Department

- Proceeds immediately to the scene and initiate actions to control the incident, in coordination with the Building Emergency Director.
- Establishes an incident command post in a safe location and request additional assistance as necessary.
- Rescues personnel, provides immediate first aid, and prepares injured personnel for transport to a full service medical facility.
- Establishes roadblocks or other traffic control measures to prevent unauthorized personnel from entering the area.
- Stabilizes and isolates residual hazardous materials by covering or other appropriate means, until the materials can be removed in a non-emergency mode and properly treated or disposed of.

Building Emergency Director

- Announce an "all clear" signal once the release is contained and controlled AND there is no longer an imminent threat to human health.

- Cleans up emergency equipment used in responding to the incident; Prepares all emergency equipment for reuse. Replaces all expendable supplies.

6.6.2 Fire and Explosion Associated with Hazardous Materials

Explosions might cause or result from a fire, or might be totally disassociated. For this plan, fire and explosion are treated simultaneously. Special chemical hazards are addressed in the Hanford Fire Department "Pre-Fire Plans," located on the wall near the entrance to the 616 NRDWSF receiving area.

Person Discovering a Fire Involving Hazardous Materials

- Avoid inhaling smoke, fumes, or vapors, even if no hazardous waste is involved.
- Activate the nearest fire alarm and call 911.
- Notify the Building Emergency Director and provide as much information as possible without personal risk.
- Move and keep people away from fire scene.

Building Emergency Director

- Identifies the character, exact source, amount and extent of any released materials.
- Contacts the Patrol Operations Center at 911 or 373-3800 and provides as much information as possible. Requests additional assistance as required.
- Evacuates part or all of the building. Ensures that the staging area remains safe.
- Considers requesting Hanford Patrol to evacuate personnel along adjacent streets and roadways.
- Ensures that the Hanford Fire Department Hazardous Material Response Team has been notified.
- Relays pertinent information, including telephone number and proposed location of the technical support center.
- Establishes a command post, in a safe location.

6.6.3 Toxic Fume Release

Anyone might discover a nonradioactive hazardous material toxic fume release. Rapid communication is vital in warning personnel and notifying appropriate response personnel.

Person Discovering a Toxic Fume Release

- TREAT ALL FUME RELEASES AS TOXIC, UNLESS ABSOLUTELY KNOWN TO BE HARMLESS.
- Avoid inhaling smoke, fumes, or vapors, even if no hazardous waste is involved.
- Do not assume that gasses or vapors are harmless just because they lack an odor.
- Contact the Building Emergency Director immediately and provide as much information as possible without personal risk.
- Keep personnel away from the area of the release.

Building Emergency Director

- Identifies the character, exact source, amount, and extent of any released materials.
- Refers to the Material Safety Data Sheets for information necessary to determine what type of respiratory and personnel protective equipment should be used to isolate the spill area and/or stop the leak.
- Notifies the Patrol Operations Center at 911 and request that the Hanford Fire Department Hazardous Material Response Team be dispatched if assistance is required. Provides as much information as possible.
- Assigns someone to meet the HAZMAT team and directs the team to the spill.
- Assesses hazards to human health and the environment (considering direct, indirect, immediate, and long-term effects) that might result from the spill.
- Contacts Pacific Northwest Laboratories Meteorology Station on 373-2716 to determine the wind speed, direction, and plume stability.
- Takes all reasonable measures necessary to ensure that fires, explosions, and releases do not occur, recur, or spread to other dangerous waste in the building.
- Where applicable, stops operations, collects and contains released waste, and removes or isolates containers.

- Evaluates evacuating part or all of the building; considers the location of the spill and ensures the safety of the evacuation staging area.

- Considers shutting down the intake air supply system, and/or retaining personnel inside the building.

6.6.4 Reactive Corrosive Chemical Hazard

Spills of corrosive wastes should be handled according to Section 6.6.1.

6.6.5 Thermal Reaction

- Leave the area of the hazard.

- Notify the Building Emergency Director.

- Notify the Patrol Operations Center at 911, as needed.

6.6.6 Flammable Liquids/Materials

Spills of flammable liquids/materials should be handled according to Section 6.6.1.

6.6.7 Asbestos Release

Asbestos containing materials normally are well encapsulated to ensure that asbestos fibers do not become airborne. An asbestos hazard emergency condition arises when a large portion of the encapsulation is damaged and the asbestos containing material is dispersed in the area (for example, burst steam piping or vehicle collision with overhead steam lines). If an asbestos release occurs:

- Evacuate all personnel from the affected area

- Isolate and post the area

- Contact Industrial Safety and Fire Protection to determine remedial action

- Contact the Building Emergency Director and provide information

- Identify a recovery/cleanup plan (at the direction of Industrial Safety and Fire Protection and a trained asbestos worker supervisor).

6.7 RADIOACTIVE MATERIALS RESPONSE PLAN - N/A

6.8 CRITICALITY RESPONSE PLAN - N/A

6.9 EXPLOSIVE MATERIALS/MUNITIONS HAZARDS RESPONSE PLAN - N/A

The 616 NRDWSF normally does not handle explosive materials or munitions, but improperly handled incompatible wastes could generate an explosion. Refer to Section 6.6.2 for such an occurrence.

6.10 PREVENTING RECURRENCE OR SPREAD OF FIRES, EXPLOSIONS, OR RELEASES

To ensure that fires, explosions, or releases do not occur, reoccur, or spread, operations have been reviewed to identify potential hazards and plant operating procedures have been developed to minimize the occurrence of unplanned incidents.

Safety systems such as automatic fire sprinklers, automatic process shutdown controls, spill containment structures, and contaminated waste stream diversion systems have been installed to ensure that if an emergency occurs, the affected area will be kept to a minimum.

Once the emergency response to an incident is complete, the Building Emergency Director is responsible for analyzing the events that lead to the incident and for conducting a critique to determine the circumstances of the occurrence, including cause(s), impacts, and lessons learned from the incident.

The requirements of DOE Order 5484.1 must be followed to ensure that all appropriate parties are aware of, and participate in decisions on the best course(s) of action to take to prevent or minimize the possibility of future occurrences.

Specific steps that might be taken for a particular incident could include the following:

- Isolating the area of the initial incident to minimize the spread of a release and/or the potential for a fire or explosion (by shutting off power, closing off ventilation systems, etc.)
- Inspecting containment structures for cracks or leaks
- Removing released material and waste remaining inside of containment structures as soon as possible
- Containing and isolating residual waste material using dikes and absorbents
- Covering or otherwise stabilizing areas where residual released materials remain, to prevent wind or precipitation run-off from causing the material to spread
- Installing new structures, systems, or equipment to enable better management of hazardous wastes or materials.

6.11 RECORDS RECOVERY

The Building Emergency Director shall ensure that any actions necessary to recover records or to prevent further damage to records will be taken as follows:

- Contacts the Patrol Operations Center via 911 or 373-3800 or the Occurrence Notification Center via 376-2900 and request that the records restoration officer be contacted.
- The records restoration officer will review the records inventory data base and determine if records storage areas exist in or near the affected area.
- If records have been damaged or could be damaged, the records restoration officer will act to recover or prevent damage to stored records in accordance with established procedures.

7.0 TERMINATION OF EMERGENCY

Normally, it is the Building Emergency Director's responsibility to declare the termination of an emergency. However, once the onsite emergency response organization is activated, only the area emergency director or the Emergency Director shall declare that an emergency has ended.

If the RL Emergency Action Coordinating Team (EACT) is activated, only the RL Director shall officially terminate the emergency.

NOTE: In all cases, however, the Building Emergency Director shall be consulted before reentry is initiated.

8.0 ACCIDENT RECOVERY

The recovery phase of the accident is handled according to a recovery plan developed for the specific event, not emergency criteria.

The TSD unit managers establish emergency response organizations that encompass all required aspects of engineering, operations, maintenance, and functional support, with direction provided by the Dangerous Waste Team and the Industrial Hygiene and Safety Department.

Recovery includes making proper notifications to proper agencies (such as the DOE, U.S. Environmental Protection Agency, or Washington State Department of Ecology).

Recovery also includes recapture (where possible), storage, and disposal of any released material, and storage and disposal of any contaminated soil or surface water (or any other material) that results from a spill, toxic fume generating event, fire or explosion.

No waste that might be incompatible with the released material can be treated, stored, or disposed of until cleanup is completed.

All emergency equipment shall be cleaned and prepared for reuse immediately following an emergency.

Consult WHC-CM-4-43, Emergency Management Procedures, Section G-3.06, "Recovery Following Emergency Events at Westinghouse Hanford Company Facilities," and WHC-EP-0564, Hanford Facility Contingency Plan for further information on recovery following emergencies.

9.0 POST EVENT ANALYSIS AND REPORTING REQUIREMENTS

Damage assessments shall be made at the conclusion of the emergency phase and the results of these assessments shall be communicated to the Emergency Control Centers. The Building Emergency Director shall act as a recovery manager and determine the steps necessary to return the facility to operational status. The following items shall be considered:

- Building structures (walls, ceilings, systems, etc.)
- Utilities
  - electricity
  - water
  - telephone
- Hazardous waste container condition
  - toxic
  - reactive
  - corrosive
  - explosive
- Waste systems
- Fire Protection Systems
- Heating, ventilation, and air conditioning
- Safety Equipment
  - eyewash/safety shower
  - fire alarm
  - crash alarms
  - sirens & alarms.

ATTACHMENT A: ASSIGNMENTS
BUILDING EMERGENCY RESPONSE ORGANIZATION LISTING

A.1 BUILDING EMERGENCY DIRECTOR

Building Emergency Director	Name	Location	Phone
PRIMARY			
ALTERNATE			
ALTERNATE			

A.2 STAGING AREA MANAGERS

Staging Area Managers	NAME	LOCATION	PHONE
PRIMARY			
ALTERNATE			
ALTERNATE			

A.3 VOLUNTEER BOMB SEARCH TEAM MEMBERS

Bomb Search Team	NAME	LOCATION	PHONE
PRIMARY			
ALTERNATE			

A.4 ENGINEERING SUPPORT

Engineering Support	NAME	LOCATION	PHONE
PRIMARY			

A.5 MAINTENANCE SUPPORT

Maintenance Support	NAME	LOCATION	PHONE
PRIMARY			

ATTACHMENT B: RCRA REGULATED UNIT CONTINGENCY PLAN

B.1 INTRODUCTION

This attachment is supplemental to the 616 NRDWSF Emergency Plan and provides specific information and response plans for the 616 Nonradioactive Dangerous Waste Storage Building RCRA Regulated Unit. Because of the nature of this regulated unit, special plans identified here are required for response to emergencies at this location.

B.1.1 Facility Covered by this Plan

This Contingency Plan covers the 616 NRDWSF as described in Section 1.4 of the Building Emergency Plan.

B.1.2 Location of the Facility

The 616 NRDWSF is located in the 600 Area of the Hanford Site in Benton County, Washington.

B.1.3 Description of Facility and Operations

The 616 NRDWSF is designed and used for the receipt and storage of nonradioactive dangerous waste generated on the Hanford Site and for the preparation of shipments to permitted offsite treatment, storage, or disposal facilities. The 616 NRDWSF contains approximately 7,700 square feet. To support safe response to potential spills, the 616 NRDWSF features independent collection trenches, sloped floors, and curbing.

B.2 PURPOSE OF THE PLAN

The purpose of this contingency plan is to lessen the potential impact on the public health and the environment in the event of an emergency circumstance. Emergencies include fire, explosion, or unplanned sudden or nonsudden release of dangerous waste or constituents to air, soil, surface water, or groundwater at the 616 NRDWSF.

B.3 DESCRIPTION OF POTENTIAL EMERGENCIES

Potential emergencies involving the regulated storage areas in the 616 NRDWSF are described in Section 3.0 of the Building Emergency Plan. Specifically, fire is addressed in Section 3.2.8. Unplanned sudden or nonsudden releases of dangerous waste or constituents are addressed in Section 3.4.

B.4 DESCRIPTION OF WHEN THE PLAN WILL BE IMPLEMENTED

The emergency plan will be implemented as described in Section 4 of the Building Emergency Plan.

B.5 EMERGENCY RESPONSE PLAN

B.5.1 Building Emergency Response Organization (Specific)

The Building Emergency Response Organization is given in Appendix A. The Building Emergency Director has the duties described in WAC 173-303 of the "Emergency Coordinator." Appendix A identifies the primary and alternates in the order in which individuals will assume responsibility.

B.5.2 Identification and Description of Specialized Emergency Equipment

Section 5.2 of the Building Emergency Plan contains a listing of all emergency equipment at the 616 NRDWSF including locations, physical descriptions, and capabilities.

B.5.3 Emergency Plan

Plans for responding to emergencies are located in Section 6.2 of the Building Emergency Plan. Fire and explosion are addressed in Section 6.6.2. Unplanned sudden or nonsudden releases of dangerous waste or constituents are addressed in Section 6.6.1. Section 6.6.3 addresses releases of toxic fumes.

Additional elements of the emergency plan that apply to units regulated by RCRA/Ecology and to dangerous waste are discussed in the following paragraphs.

Waste is transported to the 616 NRDWSF, accompanied by onsite waste tracking forms. If a waste shipment arrives that cannot be accepted (as described in WAC 173-303-370(5)) because the waste cannot be managed at the 616 NRDWSF, or there is a significant discrepancy between the shipment and the waste listed on the waste tracking forms, or the shipment is in a hazardous condition, or if the shipment cannot be returned to the generating unit, the following actions are taken.

1. The Building Emergency Director is notified
2. Hazards associated with the shipment are assessed
3. Depending on the nature of the hazards, an appropriate response is initiated
4. Responses might include the following:
    - Summon the generating unit personnel to repackage the waste
    - Overpack the waste (by 616 NRDWSF personnel)
    - Sample the waste
    - Evacuate the 616 NRDWSF
    - Summoning the site Hazardous Materials Team or other emergency organizations.

In the event of a nonradioactive hazardous material spill, facility personnel should respond as follows:

- Assess the severity of the situation and contact management, providing as much detailed information as possible (i.e., type of material, location, fire, etc.).
- Management shall contact the Hazardous Materials Response Team (HAZMAT) for an evaluation via 911 upon discovery of any spills, leaks, or structurally-deficient containers. The HAZMAT team will determine if any specialized recovery actions are required.
- Contact the HAZMAT Team (911) in the event of a ruptured container.

For larger leaks/spills the facility should respond as follows:

Building Emergency Director

- Assesses the situation; determine the type and quantity of material(s) released and the hazards involved.
- Activates the appropriate emergency alarms (if necessary), and notifies personnel in the immediate area.

Facility Personnel

- Respond to emergency alarm and stand by for further instructions.

Building Emergency Director

- Contacts the Hazardous Materials Response Team (HAZMAT) for an evaluation via 911 upon discovery of any spills, leaks, or structurally deficient containers.
- Initiates appropriate actions to contain/control the waste or material as directed by the HAZMAT team.
- Directs personnel to take those actions that can be safely performed to control or contain the release before assistance arrives.

Hanford Fire Department

- Proceeds immediately to the scene and initiate actions to control the incident, in coordination with the Building Emergency Director.
- Establishes an event command post in a safe location and requests additional assistance as necessary.
- Rescues personnel, provides immediate first aid, and prepares injured personnel for transport to a full service medical facility.

- Establishes roadblocks or other traffic control measures to prevent unauthorized personnel from entering the area.

- Stabilizes and isolates residual hazardous materials by covering or other appropriate means, until the materials can be removed in a non-emergency mode and properly treated or disposed of.

Building Emergency Director

- Announce an "all clear" signal once the release is contained and controlled AND there is no longer an imminent threat to human health.

- Cleans up emergency equipment used in responding to the incident; Prepares all emergency equipment for reuse. Replaces all expendable supplies.

A description of the arrangements agreed to by hospitals, state and local agencies and governments, is located in Appendix A of the Emergency Plan of the U.S. Department of Energy-Richland Operations Office (DOE-RL).

The evacuation plan for the 616 NRDWSF is located in Sections 1.5 and 6.1 of this Building Emergency Plan.

Copies of this Contingency Plan are maintained at the 616 NRDWSF and by onsite emergency organizations. Additional locations include the 609-A Fire Station, the 200 East Area Emergency Control Center (2750-E Building), the Emergency Management Center (1170 Building), and the DOE-RL/Emergency Action and Coordination Team of the Contingency Plan room in the Federal Building. The Department Of Energy is responsible for distribution to all local police departments, fire departments, hospitals, and state and local emergency response teams that might be called to provide emergency services.

Amendments to this Contingency Plan will be made annually or in one of the following situations, if needed:

- Whenever applicable regulations or the 616 NRDWSF permit are revised

- The contingency plan fails in an emergency

- The 616 NRDWSF changes (in its design, construction, operation, maintenance, or other circumstances) in a way that materially increases the potential for fires, explosions, or releases of dangerous waste or dangerous waste constituents

- The 616 NRDWSF changes in a way that changes the response necessary in an emergency

- The list of emergency equipment changes.

The responsibilities and authority of the Building Emergency Director are established in Section 5.1 of the Emergency Plan, WHC-CM-4-1.

A Building Emergency Director will at all times be either on the premises or on call with the responsibility for coordinating all emergency response measures. The Building Emergency Director will be thoroughly familiar with all aspects of this Building Emergency Plan and the onsite emergency plans. The Building Emergency Director also will be thoroughly familiar with all operations and activities at the 616 NRDWSF, the location and properties of all waste handled, the location of all records within the building, and the building layout. In addition, this person has the authority to commit the resources needed to carry out this Contingency Plan.

Whenever there is an imminent or emergency situation involving RCRA/Ecology units, the Building Emergency Director (or designee) will immediately perform the following:

- Activate internal building alarms or communication systems, where applicable, to notify all building personnel
- Initiate notifications of appropriate state or local agencies with designated response roles if their help is needed (via the Hanford site emergency organization and the DOE as shown in Figure 6-3 of the Emergency Plan WHC-CM-4-1.

Whenever there is a release, fire, or explosion involving RCRA/Ecology units, the Building Emergency Director will immediately identify the character, exact source, amount, and extent of any released materials.

Concurrently, the Building Emergency Director will assess possible hazards to human health and the environment (considering direct, indirect, immediate, and long-term effects) that might result from a release, fire, or explosion.

If the Building Emergency Director determines that the building has had a release, fire, or explosion that could threaten human health or the environment outside the building, the Building Emergency Director must report the findings as follows.

- If the assessment indicates that evacuation of local areas might be advisable, BED must immediately notify local authorities via the Hanford Site emergency organization. The BED must be available to help appropriate officials decide whether local areas should be evacuated.
- Using the Hanford site emergency organization on 911 and the operating contractor's Environmental Compliance Support organization on 373-4949, the BED immediately must initiate notifications to Ecology and either the government official designated as the on-scene coordinator or the National Response Center (using the 24-hour toll-free number 1-800-424-8802).

The Building Emergency Director assessment report that is forwarded to offsite agencies will include the following:

- Name and telephone number of the reporter

- Name and address of the building
- Time and type of incident (e.g., release, fire)
- Name and quantity of materials involved to the extent known
- Extent of injuries if any
- Possible hazards to human health or the environment outside the 616 NRDWSF

During an emergency, the Building Emergency Director will take all reasonable measures necessary to ensure that fires, explosions, and releases do not occur, recur, or spread to other dangerous waste in the 616 NRDWSF. These measures will include, where applicable, stopping operations, collecting and containing released waste, and removing or isolating containers.

If the building stops operations in response to a fire, explosion, or release, the Building Emergency Director will monitor for leaks, pressure buildup, gas generation, or ruptures in valves, pipes, or other equipment, wherever this is appropriate.

Immediately after an emergency, the Building Emergency Director will provide for the treatment, storage, or disposal of recovered waste, contaminated soil or surface water, or any other material that results from a release, fire, or explosion at the building.

The Building Emergency Director will ensure that, in the affected areas of the building, the following is performed:

- No waste that might be incompatible with the released material is treated, stored, or disposed of until cleanup procedures are completed
- All emergency equipment is restored to a condition fit for reuse before operations are resumed

The Building Emergency Director will initiate notification to Ecology and local authorities (via the Hanford site organization and the Department of Energy) that the 616 NRDWSF is in compliance with the incompatible waste and emergency equipment requirements noted previously before operations are resumed in the affected area(s) of the building. Notification to Ecology and local authorities will be verified as completed before restart.

The Building Emergency Director will verify that the time, date, and details are recorded in the operating log for any incident that requires implementing this portion of the Contingency Plan.

The Building Emergency Director will cooperate in preparing a written report on the incident for DOE to submit to Ecology within 15 days after the incident. This report will include the following information:

- Name, address, and telephone number of the owner or operator
- Name, address and telephone number of the unit
- Date, time, and type of incident (e.g., fire, explosion)
- Name and quantity of material(s) involved
- Extent of injuries
- An assessment of actual or potential hazards to human health or the environment
- Estimated quantity and disposition of recovered material that resulted from the incident
- Cause of the incident
- Description of the corrective action taken to prevent recurrence of the incident.

ENCLOSURE 3

PART III CHANGES REQUIRED TO UPDATE UNIT SPECIFIC CONDITIONS INCLUDED FOR THE 305-B STORAGE UNIT

305-B Storage Unit (305-B) Permit Application Changes

- Page 2-15, lines 29-31. Change "1988" to "1991" both places it appears.

  Reason: The Uniform Fire Code has been republished since the preparation of the permit application. The revised date cited reflects the current set of regulations which 305-B utilizes for compliance. Refer to Appendix I of Washington Administrative Code (WAC) 173-303-830, item A.1.

- Page 3-1, line 11, through Page 3-4, line 20. Remove Pages 3-1 through 3-4 and replace with revised Section 3.1, attached (Attachment 1).

  Reason: During the preparation of the permit, Ecology requested that additional information be provided concerning the waste streams received at 305-B. This revised description provides the information requested. Refer to Appendix I of WAC 173-303-830, item A.1.

- Page 4-9, line 41. Remove Page 4-9 and replace it with the attached page (Attachment 2) describing the Flammable Liquids Storage Module.

  Reason: Since the preparation of the permit application, a stand-alone module has been installed in the high bay storage area to provide additional capacity and fire protection capabilities. This text provides a description and a diagram of the module. Refer to Appendix I of WAC 173-303-830, item A.1.

- Page 4-15 and 4-16. Replace Figure 4-7 with the attached replacement Figure 4-7 (Attachment 3).

  Reason: The revised figure reflects the addition of the Flammable Liquids Storage Module, as noted and described above. Refer to Appendix I of WAC 173-303-830, item A.1.

- Page 4-17, line 23-36. Replace Section 4.1.1.6.11 with the attached replacement Section 4.1.1.6.11 (Attachment 4).

  Reason: Additional storage cabinets have been added to provide additional segregation for small containers. The revised storage limits for radioactive wastes are a result of changes to DOE Orders and reflect the current operating criteria for the RMW Storage Area. Refer to Appendix I of WAC 173-303-830, item A.1.

- Page 4-23. Replace Table 4-2 with revise Table 4-2.

  Reason: The revised table (Attachment 5) reflects the radionuclide storage limits as a result of the changes listed above. Refer to Appendix I of WAC 173-303-830, item A.1.

- Page 4-21. Replace Figure 4-9 with the attached replacement Figure 4-9 (Attachment 6).

  Reason: This figure reflects the addition of storage cabinets to the cell as noted and described above. Refer to Appendix I of WAC 173-303-830, item A.1.

- Page 6-1, lines 46-52. Delete this paragraph.

  Reason: The security guards and gates have been removed from the entrances to the 300 Area where 305-B is located. Refer to Appendix I of WAC 173-303-830, item A.1.

- Page 6-3, lines 15-18. Delete the first two sentences of this paragraph.

  Reason: The security guards and gates have been removed from the entrances to the 300 Area where 305-B is located. Refer to Appendix I of WAC 173-303-830, item A.1.

- Page 6-16, lines 15-19. Replace the first four bullets with the following:

  "· 6 sets of chemically resistant suits, aprons, boots, and gloves."

  Reason: The personal protective equipment stored in 305-B has been revised to provide more modern protective clothing for use. Refer to Appendix I of WAC 173-303-830, item A.1.

- Page 7-17, lines 5-9. Replace the first four bullets with the following:

  "· 6 sets of chemically resistant suits, aprons, boots, and gloves."

  Reason: The personal protective equipment stored in 305-B has been revised to provide more modern protective clothing for use. Refer to Appendix I of WAC 173-303-830, item A.1.

- Page 8-3, line 24. Add the following sentence to this paragraph: "Equivalent training may be taken in place of the training identified in Figure 8-1 with approval from the 305-B Unit Operating Supervisor or the Waste Management Section manager."

  Reason: This sentence allows for equivalent training to substitute for the actual PNL training courses shown in the training matrix. Equivalent training may be utilized if the PNL course(s) are unavailable, or when equivalent training has already been taken. Refer to Appendix I of WAC 173-303-830, item A.1.

ENCLOSURE 3
ATTACHMENT 1

3.1 CHEMICAL, BIOLOGICAL, AND PHYSICAL ANALYSIS

Wastes stored at 305-B are from DOE operated and managed facilities and are usually generated by PNL staff. Wastes stored a the unit can be categorized as originating from seven basic sources:

- Waste from nonspecific sources
- ·Discarded commercial chemical products
- ·Waste from research activities using radioactive isotopes
- ·Waste from chemicals synthesized or created in research laboratories
- Discarded commercial products exhibiting dangerous-waste characteristics and/or criteria.
- Oil wastes
- Waste from maintenance activities.

Each of these waste categories is discussed below, including waste descriptions, hazard characteristics, and bases for hazard designations. A complete listing of wastes managed at 305-B, specified by waste code, is included in the Part A application Form 3. The following information includes that which must be known to treat, store, or dispose of the wastes, as required under WAC 173-303-806(4)(a)(ii).

Wastes from Nonspecific Sources. Wastes from nonspecific sources consist of those listed wastes identified in WAC 173-303-9904. The Part A permit application for 305-B identifies the following wastes from this category with their estimated annual management quantities:

- F001 - spent halogenated degreasing solvents and sludges (2000 kg/yr)
- F002 - spent halogenated solvents and still bottoms (2000 kg/yr)
- F003 - spent nonhalogenated solvents and still bottoms (5000 kg/yr)
- F004 - spent nonhalogenated solvents and still bottoms (1000 kg/yr)
- F005 - spent nonhalogenated solvents and still bottoms (5000 kg/yr)
- F027 - discarded polychlorinated phenol formulations (200 kg/yr)

These halogenated and nonhalogenated solvents are in the form of spent solvents; no still bottoms are generated. Degreasing solvents (F001), as well as spent halogenated solvents (F002), are used primarily in research although some commercial applications do exist (e.g., printing, duplicating). Spent non-halogenated solvents (F003, F004, and F005) also come primarily from research laboratories, although a significant amount of methyl ethyl ketone (F005) is generated through maintenance applications such as the Craft Services paint shop (350 Building). Manufacturing is not performed at PNL; therefore, dangerous wastes from specific sources (WAC 173-303-9904 "K" Wastes) are not generated.

Wastes in this category (F Wastes) are generally received at 305-B in 1-gal and 5-gal flammable liquid safety cans ("flash cans"). Methyl ethyl ketone, which is received in 55-gal drums, is an exception.

Wastes in this category are designated on the basis of the generator's knowledge [i.e., information from container labels or material safety data sheets (MSDS)], or by sampling. Sampling is performed if there is insufficient information to document the composition and characteristics of the waste. The waste generator is responsible for specifying the characteristics of the waste on the basis of knowledge of the chemical products used (i.e., information supplied by the manufacturer) and the process generating the waste. These listed wastes are all designated as DW unless the generator determines through process knowledge (i.e., knowledge of materials used and concentrations used) that wastes F001 or F002 contain greater than 1% halogenated hydrocarbons. Wastes with greater than 1% halogenated hydrocarbons are designated as extremely hazardous waste (EHW). Wastes F001 through F005 are also designated as land disposal restricted (LDR) wastes under 40 CFR 268.30 (solvent wastes). Waste F027 is designated as an LDR waste under 40 CFR 268.31 (dioxin-containing waste).

Discarded Chemical Products. Discarded chemical products are those listed in WAC 173-303-081. The Part A permit application for 305-B identifies all of the discarded chemical products listed in WAC 173-303-9903 (U and P listed wastes) and specifies an estimated maximum annual management quantity, based on prior experience, of 200 kg/yr for each of these wastes. Only a few of these wastes are typically generated at any one time. The Part A permit application listed all of these wastes, however, because the wide variety of research activities conducted at PNL presents the potential to generate any of these wastes.

These wastes (U wastes and P wastes) are typically received at 305-B in the manufacturer's original container. Approximately 70% of these wastes are in partially full, opened containers, and the remaining 30% are in sealed, unopened containers. These containers typically consist of glass and polyethylene jars or bottles and metal cans having a volume equal to or less than 4 L.

Wastes in this category are designated on the basis of the generator's process knowledge. As these wastes are usually in original containers, information on the container label is verified by generator knowledge (i.e., knowledge that material is in its original container) and is used to identify contents. Wastes in "as procured" containers (i.e., original container with intact label) are not sampled. These listed wastes contain those designated as DW as well as those designated as EHW. These wastes are also subject to LDR regulations under 40 CFR 268, including disposal prohibitions and treatment standards.

Waste from Research Activities Using Radioactive Isotopes. Dangerous wastes (DW) from research activities using radioactive isotopes are mixed waste. These wastes are generated in laboratories performing chemical and physical research and consist primarily of radiologically contaminated chemicals or lead stacked in sealed 55-gal drums. These wastes are designated on the basis of the generator's knowledge or on the basis of sampling and analysis. The generator's knowledge is used if the generator has kept accurate written records of the identities and concentrations of constituents present in the waste. For example, many generators keep log sheets for accumulation containers in satellite areas to keep a record of waste constituents. If information available from the generator is inadequate for waste designation, the wastes are sampled (as described in Section 5.2) and the results of the analysis are used for designation. These wastes include those designated as DW mixtures under WAC 173-303-084 and also those designated as characteristic DW under WAC 173-303-090. The Part A permit application for 305-B includes all categories of toxic, persistent, and carcinogenic waste mixtures

(i.e., both DW and EHW). While not all of these wastes are currently generated or have been generated, the wide variety of research activities conducted at PNL presents the potential that these wastes could be generated and require subsequent management at 305-B. Similarly, the Part A permit application includes the characteristic DW categories D001 through D043 (i.e., ignitable, corrosive, reactive, and TCLP toxic due to metals or organics content).

Flammables (i.e., flash point less than 100° Fahrenheit) will not be stored in the below-grade mixed waste cell; however, ignitables (D001 due to oxidizer content) will be stored in this cell. Flammable mixed waste is not stored below grade due to UFC restrictions. These wastes are stored above the grade in a flammable storage module. The flammable mixed waste module is equipped with secondary containment to provide greater than 100% secondary containment volume.

The waste in this category could include those designated as either DW or EHW. These wastes could also be federal LDR wastes regulated under 40 CFR 268 as well as state LDR wastes regulated under WAC 173-303-140 (e.g., leachable inorganic wastes).

Waste from Chemicals Synthesized or Created in Research Laboratories. Wastes from chemicals synthesized or created in research laboratories typically consist of organics in quantities of 100 g or less, received in small containers.

These wastes are designated on the basis of the generator's knowledge or on the basis of sampling and analysis. The generator's process knowledge is used if the he has kept accurate records of the identities and concentrations of constituents present in the waste (e.g., log sheets for accumulation containers). If information available from the generator is inadequate for waste designation, the wastes are sampled (as described in Section 3.2) and the results of the analysis are used for designation. These wastes include those designated as DW mixtures under WAC 173-303-084 and also those designated as characteristic DW under WAC 173-303-090. The Part A permit application for 305-B includes all categories of toxic, persistent, and carcinogenic waste mixtures (i.e., both DW and EHW). While not all of these wastes are currently generated or have been generated, the wide variety of research activities conducted at Hanford presents the potential that these wastes could be generated and require subsequent management at 305-B.

The wastes in this category could include those designated as either DW or EHW. These wastes could also be federal LDR wastes regulated under 40 CFR 268 as well as state LDR wastes regulated under WAC 173-303-140 (e.g., organic/carbonaceous wastes).

Discarded Commercial Products Exhibiting Dangerous Waste Characteristics. Many discarded chemical products handled in 305-B are not listed in WAC 173-303-9903 and are still considered DW since they exhibit at least one DW characteristic and/or criterion (WAC 173-303-090 and WAC 173-303-084). These wastes are included with those listed in the Part A permit application under waste codes D001 through D043, WT01, WT02, WP01, WP02, and WC02. These wastes are typically received at 305-B in the manufacturer's original container. Approximately 70% of the wastes are in partially full, opened containers; the remaining 30% are in sealed, unopened containers for which no local recycle/reuse options can be identified. These containers typically consist of glass and polyethylene jars or bottles and metal cans having a maximum volume of 4 L.

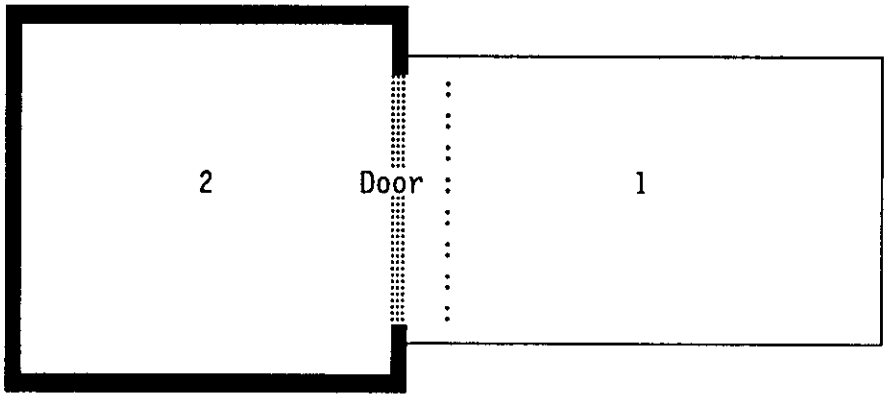
Wastes in this category are designated based on the generator's process knowledge. As these wastes are usually in their original containers, information on the container label is verified by the generator's process knowledge and is used to identify the contents. These wastes contain those designated as DW as well as those designated as EHW. These wastes could also be federal LDR wastes regulated under 40 CFR 268 as well as state LDR wastes regulated under WAC 173-303-140 (e.g., organic/carbonaceous wastes, leachable inorganic wastes)

Oil Wastes. Oil wastes typically consist of pump oil, PCBs, soil contaminated with oil, and other commercially refined products contaminated with DW constituents. These wastes are typically received in 5 gal or larger containers and are designated on the basis of the generator's process knowledge or on the basis of sampling and analysis. The generator's process knowledge is used if the generator has kept accurate records of the identities and concentrations of constituents present in the waste (e.g., log sheets for accumulation containers). If information available from the oils were used in machinery or a process where contamination by other wastes is suspected, the wastes are sampled and the results usually designated as characteristic wastes (including W001) and/or wastes from nonspecific sources (F001 through F005), as listed above, or toxicity characteristic (D004-D043), depending on the type of contamination.

Waste from Maintenance Activities. Waste generated during maintenance activities typically consists of crushed fluorescent light tubes, paints, light ballasts, and batteries. These wastes are typically received in 5 gal or larger containers and are designated by MSDS or analytical data. The generator's process knowledge is used if the generator has kept accurate records of the identities and concentrations of constituents present in the waste (e.g., log sheets for accumulation containers). If information available from the generator or MSDS is inadequate for waste designation or if the material was used in machinery or a process where contamination by other wastes is suspected, the wastes are sampled and the results of the analysis are used for designation. These wastes are usually designated as characteristic wastes (including W001) and/or wastes from nonspecific sources (F001 through F005), as listed above, or toxicity characteristic (D004-D043), depending on the type of contamination.

ENCLOSURE 3
ATTACHMENT 2

4.1.1.6.5.a. Flammable Liquids Storage Module. The flammable liquids storage module is a self-contained storage module that allows additional storage space for flammable wastes. Located on the southeast wall, it is connected to the buildings fire suppression system. The flammable storage module has a 2-hour fire rated containment system so that according to the UFC an unlimited capacity is allowed. However, the flammable waste storage capacity of the flammable liquid storage module is limited by the 240 gal capacity of the module's secondary containment system. No more than 240 gal of any combination of flammable liquid classes will be stored in the module. This flammable waste storage capacity is in addition to the flammable storage limits for the high bay. A diagram of the module is provided in Figure 4-10.



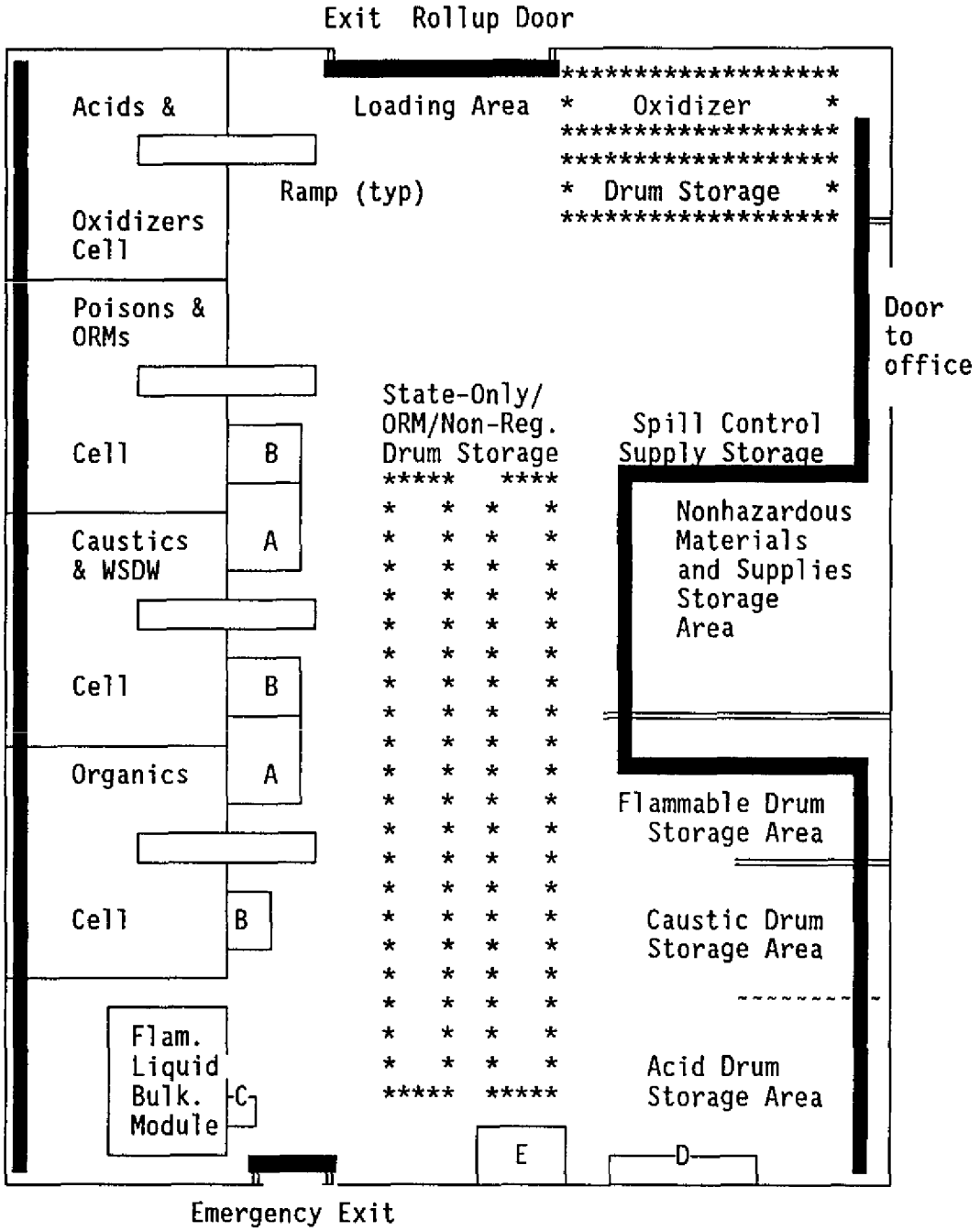
LEGEND

1 Loading Ramp

2 Drum/Container Storage Area (Flammable liquid storage, 240 gallon max.)

Figure 4-10. Flammable Liquids Storage Module.

ENCLOSURE 3
ATTACHMENT 3



Scale: 1"=10' prox.

LEGEND: On next page

Figure 4-7. High Bay Storage Area. (Page 1 of 2)

LEGEND -- HIGH BAY STORAGE AREA DIAGRAM

***Boundary of palletized drum storage areas

═══ 3½" x 6" angle iron sealed to floor as inflow control to trench (see construction detail, App. 4A, Plate 2)

~~~ 4'H x 10'L Stainless Steel Splash Wall

█ Secondary containment trenches

A Large Drum Storage Cabinet (flammable labpack or bulked drum storage)

B Small Drum Storage Cabinet (flammable labpack or bulked drum storage)

C Small Storage Cabinet (asbestos)

D Material Handling Hood

E Flammable Liquid Storage Module
~~~

ENCLOSURE 3
ATTACHMENT 4

4.1.1.6.11 RMW Storage Area. Radioactive mixed waste that is not flammable per UFC (i.e., flash point above 100°F) is stored in a special area in the basement of 305-b. For additional segregation capability, there are six small chemical storage cabinets and four 5 ft. x 5 ft. stainless steel "container pans" with 12 in. sides. The containment pans are mounted to the floor or wall of the cell to provide segregated storage for potentially incompatible mixed waste streams. Drums stored in this area are stored on pallets to prevent potential contact with spilled waste in containment during an emergency. A diagram of this area is provided in Figure 3A-12.

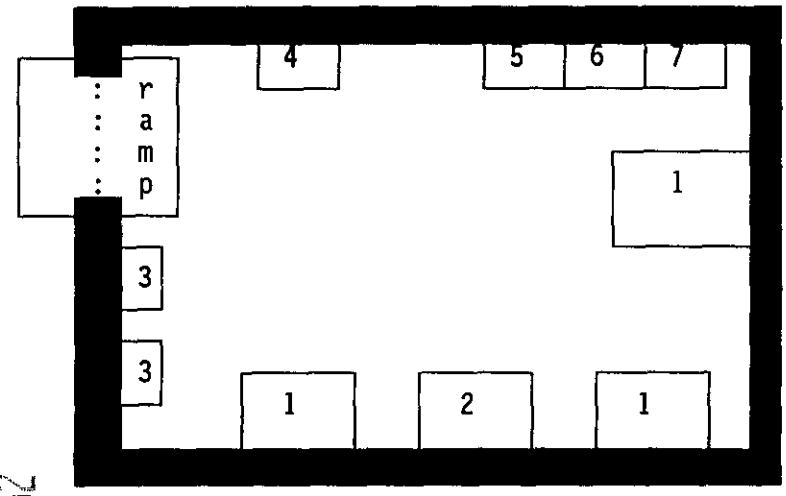
In normal use, the storage capacity of this area is limited by the radionuclide limits imposed by the DOE for "low inventory facilities." These limitations are defined in DOE-STD-1027-92, Hazard Categorization and Accident Analysis Techniques for Compliance with DOE Order 5480.23, Nuclear Safety Analysis Reports, and are included in the radiation work permit for the mixed waste storage area.

ENCLOSURE 3
ATTACHMENT 5

Thresholds and Radionuclides

Isotope	Category 3 Curies	Threshold Grams	Isotope	Category 3 Curies	Threshold Grams	Isotope	Category 3 Curies	Threshold Grams
H-3	1.0E+03	1.0E-01	Tc-99	1.7E+03	1.0E+05	Hf-181	7.6E+02	4.5E-02
C-14	4.2E+02	9.4E+01	Ru-106	1.0E+02	3.0E-02	Ir-192	9.4E+02	1.0E-01
Na-22	2.4E+02	3.8E-02	Ag-100m	2.6E+02	5.5E-02	Au-198	2.0E+03	8.2E-03
P-32	1.2E+01	4.2E-05	Cd-109	1.8E+02	7.0E-02	Hg-203	3.6E+02	2.6E-03
P-33	9.4E+01	6.0E-04	Cd-113	1.1E+01	3.2E+13	Pb-210	3.6E-01	4.7E-03
P-32, acid	1.2E+01	4.2E-05	In-114m	2.2E+02	9.5E-03	Bi-207	5.0E+02	9.7E+00
P-33, acid	9.4E+01	6.0E-04	Sn-113	1.3E+03	1.3E-01	Bi-210	3.2E+02	2.6E-03
S-35	7.8E+01	1.8E-03	Sn-123	3.2E+02	3.9E-02	Po-210	1.9E+00	4.2E-04
Cl-36	3.4E+02	1.0E+04	Sn-126	1.7E+02	6.0E+03	Rn-222	1.0E+01	6.5E-05
K-40	1.7E+02	2.4E+07	Sb-124	3.6E+02	2.1E-02	Ra-223	6.2E+01	1.2E-03
Ca-45	1.1E+03	6.2E-02	Sb-126	2.8E+02	3.4E-04	Ra-224	2.0E+02	1.2E-03
Ca-47	7.0E+02	1.1E-03	Te-127m	4.0E+02	4.2E-04	Ra-225	7.2E+01	1.8E-03
Sc-46	3.6E+02	1.1E-02	Te-129m	4.0E+02	1.3E-02	Ac-225	3.2E+01	5.5E-04
Ti-44	6.2E+01	3.6E-01	I-125	5.6E-01	3.2E-05	Ac-227	4.2E-02	5.8E-04
V-48	6.4E+02	3.8E-03	I-131	9.2E-01	7.4E-06	Th-228	1.0E+00	1.2E-03
Cr-51	2.2E+04	2.4E-01	Xe-133	2.0E+04	1.1E-01	Th-230	6.2E-01	3.1E+01
Mn-52	3.4E+02	7.6E-04	Cs-134	4.2E+01	3.3E-02	Th-232	1.0E-01	9.1E+05
Fe-55	5.4E+03	2.2E+00	Cs-137	6.0E+01	6.9E-01	U-233	4.2E+00	4.4E+02
Fe-59	6.0E+02	1.2E+02	Ba-133	1.1E+03	4.3E+00	U-234	4.2E+00	6.7E+02
Co-60	2.8E+02	2.5E-01	Ba-140	6.0E+02	8.2E-03	U-235	4.2E+00	1.9E+06
Ni-63	5.4E+03	9.5+01	Ce-141	1.0E+03	3.5E-02	U-238	4.2E+00	1.3E+07
Zn-65	2.4E+02	2.9E-02	Ce-144	1.0E+02	3.1E-02	Np-237	4.2E-01	6.0E+02
Ge-68	1.0E+03	1.5E-01	Pm-145	2.0E+03	1.4E+01	Np-238	1.3E+03	5.0E-03
Se-75	3.2E+02	2.2E-02	Pm-147	1.0E+03	9.5E-01	Pu-238	6.2E-01	3.6E-02
Kr-85	2.0E+04	5.1E+01	Sm-151	1.0E+03	3.8E+01	Pu-239	5.2E-01	8.4E+00
Sr-89	3.4E+02	1.2E-02	Eu-152	2.0E+02	1.2E+00	Pu-241	3.2E+01	3.1E-01
Sr-90	1.6E+01	1.2E-01	Eu-154	2.0E+02	7.6E-01	Am-241	5.2E-01	1.5E-01
Y-91	3.6E+02	1.5E-02	Eu-155	9.4E+02	2.0E+00	Am-242m	5.2E-01	5.3E-02
Zr-93	6.2E+01	2.5E+04	Gd-153	1.0E+03	2.8E-01	Am-243	5.2E-01	2.6E+00
Zr-95	7.0E+02	3.3E-02	Tb-160	5.6E+02	5.0E-02	Cm-242	3.2E+01	9.7E-03
Nb-94	2.0E+02	1.1E+03	Ho-166m	7.2E+01	4.0E+01	Cm-245	5.2E-01	3.0E+00
Mo-99	3.4E+03	7.1E-03	Tm-170	5.2E+02	8.7E-02	Cf-252	3.2E+00	6.0E-03

ENCLOSURE 3
ATTACHMENT 6



Scale: 1/8=1' prox.

LEGEND

Concrete wall, epoxy sealed continuous with floor, to a height of 12"

: Metal sliding door (radiation & spill protective)

1 5'x 5'x 8" deep stainless steel containment pan

2 Stainless steel pan for PCB MW storage (6' x 6' x 8" deep)

3 Corrosive Storage Cabinet

4 Flammable Solids Storage Cabinet

5 Washington State Dangerous Waste Storage Cabinet

6 Poisons Storage Cabinet

7 Oxidizer Storage Cabinet

Figure 4-9. Radioactive Mixed Waste Storage Area